KNOWLEDGE & ATTITUDES CONCERNING NEAR-DEATH EXPERIENCES & ATTITUDES TOWARD DEATH

by Charles Reid:

A Thesis submitted in conformity with the requirements for the degree of Master of Science, Graduate Department of Community Health, University of Toronto

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Knowledge & attitudes concerning near-death experiences & attitudes toward death
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ABSTRACT

The dramatic attitude changes experienced by individuals reporting near-death experiences have been widely acknowledged in professional publications and in the lay media. What is not known, however, is whether individuals who merely read or hear about such experiences are impacted significantly.

This study investigated the relationship between knowledge and attitudes concerning near-death experiences and attitudes toward death in a community sample. All of the findings are consistent with the theory that people interpret NDE material in a way that may confirm and strengthen, but does not radically change, their own established meanings of life and death.

It was argued that NDEs are likely to have a continued impact on the institutions, beliefs, and practices of North American society given the likelihood of continued media attention and continued receptivity by the general public.

A recommendation was made that all health care and counselling professionals dealing with issues of death receive instruction regarding NDEs.
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INTRODUCTION - General focus, objective, and relevance of this study

In our scientifically advancing, Western society the last several decades have been marked by both the advent of ever more effective technologies in the area of emergency medical care and by the increased dissemination of information to the lay public on C.P.R. and other "life-saving" procedures. Along with these increasingly sophisticated and widespread skills have come a great number of first-hand accounts from individuals who believe that, for a short time, they had indeed experienced physical death.

Yet other factors, in addition to improved resuscitative care, may be contributing to the growing number of these reports. An aging population and an increased openness to discussing spiritual experiences, particularly the growing openness towards near-death experiences, may have also contributed to the recent increase in number of near-death experiences experienced and/or reported over the last several decades.

The lay media and, increasingly, the professional literature are now replete with descriptions of how these Near-Death Experiences, or NDEs, have affected those individuals who believe they have "returned" to life, often claiming radically changed attitudes toward life and death. Apparently, the meaning of life and death had been changed for these near-death experiencers (NDErs) (Moody, 1976; Noyes, 1980; Ring, 1980; Kason, 1994). However a related area, which remains virtually unexplored, is whether individuals who come to know about NDEs second-hand, by hearing or reading about these accounts, are affected by them and, if so, in what manner and to what extent.

The objective of this study is to investigate the following questions: what are the knowledge and attitudes concerning NDEs displayed by the sample? Are these persons' knowledge of NDEs related to their attitudes toward NDEs, and; are these persons' knowledge of and attitudes toward NDEs related to their attitudes toward life and death (and, hence, the meaning that life and death hold for these individuals)?

The relevance of research into the NDE knowledge and attitudes, and life and death attitudes of 'non-near-death experiencers', or non-NDErs, remains speculative. However, the
importance of this topic is underscored by the potential association between information on NDEs and a belief in life after death. Such a belief may be closely related to attitudes toward death of self and others, and, indeed, to life attitudes (Greyson, 1992; Holcomb, Neimeyer, and Moore, 1993; Ring, 1980). If, for some non-NDErs, NDE information is found to impact upon belief in life after death, it may help to solidify or change the socially constructed meaning that life and death hold for these individuals.

For these reasons, a sample of adults in the Toronto community was approached with the aim of investigating the effects, if any, of information about NDEs on life and death attitudes.

In order to pursue this line of research, it was necessary to review the literature on NDEs, on death attitudes, and on the sociology and psychology of death and dying to clarify key concepts and findings. This information is found in professional journals and texts written by scholars of thanatology (the study of death and death-related issues), and by professionals from the fields of health care, sociology, psychology, and religious studies. It will be necessary to outline the theoretical perspective taken in designing, implementing, and analyzing this research: this is done in the Review of Literature section. It will also be necessary to describe the methods selected to measure the NDE knowledge and attitudes and also the life and death attitudes of participants. This information has generally been acquired from previously constructed measures published in professional journals and is presented in the Methods section of this thesis.

A review of the related literature on near-death experiences and on death attitudes follows. Included in this is an outline of the theoretical framework within which this research is situated. The chapter ends with a presentation of the specific research questions for this study, complete with theoretically-based hypotheses.

**REVIEW OF LITERATURE: THEORETICAL PERSPECTIVE & KEY CONCEPTS**

The NDE phenomenon - a glimpse beyond life?

Historical examples of NDE-like experiences have been reported by religious scholars (Cressy, 1996; Zaleski, 1987), historians (Holck, 1978), and near-death researchers (Moody,
Similarities have been noted between modern NDE accounts and ancient texts such as The Egyptian Book of the Dead, and the Tibetan Book of the Dead (Lorimer, 1995, pp. 165-72). Plato wrote about an NDE-like event in his tenth book of The Republic (Zaleski, 1996, p. 78). The Bible, too, may contain references to NDEs (see II Corinthians 12: 2-4, for example).

NDEs have been reported in many cultures (Lorimer, 1995, pp. 81-86). In the contemporary Western world they have been written about by authors such as Hemingway (Audette, 1982), and experienced by popular figures such as actor Peter Sellers (Zaleski, 1987, pp. 73-75) and even by renowned scientists such as Carl Jung (Yates, 1995, pp. 101-112).

In keeping with the numerous historical and, especially, modern NDE accounts, it has been estimated that as many as one-third of those who have come close to death have experienced NDE-like events (Gallop and Proctor, 1982; Greyson and Stevenson, 1980). Some NDE proponents suggest that individuals not reporting such an experience may have been affected by amnesics present in general anaesthetics or by another means of repression of the event, or simply that such people didn't come close enough to dying to have an NDE (Harpur, 1991, pp.40-41).

According to NDE researcher Kenneth Ring, contemporary Near-death studies essentially had their origin in the early 1970's with the work of psychiatrist Russell Noyes (1984, p. 7). Noyes studied persons who had experienced a "close brush with death" and set a precedent for future research in this area by conducting qualitative interviews with near-death survivors directly. At approximately the same time, Elizabeth Kubler-Ross, a psychiatrist already famous for her work with dying patients, began speaking openly about the NDEs reported by patients she had interviewed. Kubler-Ross' growing popularity with the general public at this time reportedly helped to set the stage for the tremendously well-received book Life After Life by psychiatrist Raymond Moody in 1976, which has since sold millions of copies (Ring, 1984, p.7).

Moody listened to the experiences of men and women who had recovered after coming close to death. Some of these individuals were reported to have been pronounced dead by a physician (Moody, 1976, Kastenbaum, 1991, p.317). In his text he includes excerpts of some 50 interviews, along with his own observations on these "near-death experiences", a term he coined in the book (Ring, 1984, p.7). Thanatologist Robert Kastenbaum credits Moody's book with
"bringing the (NDE) phenomenon out into the open" since "almost immediately" after its publication, "other reports of NDEs appeared from many sources" (1991, p.316).

Individual accounts of NDEs continued to appear sporadically throughout the late 1970's and early 1980's, including several clinical cases such as those reported by Sabom and Kreutziger (1977). During this time period, research into NDEs reflected an increased awareness of the importance of proper scientific investigation.

As the first real investigation of NDEs from a scientific point of view, Psychologist Kenneth Ring's *Life At Death* (1980) showed that NDEs varied little across different conditions of age, gender, economic status, previous degree of religiosity, and near-death onset (i.e. 'cause' of NDE). These findings were replicated by Sabom (1982). Reports of NDEs were found to come from many kinds of people, and in many types of situations (Kastenbaum, 1991, p.318).

While articles on NDEs started to appear more frequently in the professional literature of medicine, psychology and philosophy, much controversy surfaced over the interpretation of NDEs.

In 1981, the International Association for Near-Death Studies (IANDS) was established. It's contributions to this subject area include publication of a quarterly journal and the sponsorship of professional conferences on NDEs (Ring, 1984, p.9).

Nineteen eighty-two marked the year in which pollster George Gallop's work estimated that eight million Americans had personally had experiences classifiable as NDEs (Gallop & Proctor, 1982). In so doing, Gallop effectively legitimized the NDE as an authentic and widespread phenomenon (Ring, 1984, p.10).

Research during the 1980's concerned itself, much as it does currently, with issues such as: cross-cultural validation of the phenomenon; argumentative discussion of possible psychological and neurophysiological "explanations" for NDEs and; investigation into possible links between NDEs and other phenomena such as Kundalini experiences.

Various proposed explanations for NDEs will be addressed at a point further along in this chapter, as will a more comprehensive discussion of the apparent after effects of NDEs on those reporting them. Presently, however, it is necessary to define the term NDE.
Defining an NDE

What qualifies an experience as an NDE? Kastenbaum suggests that a person must have been in a state close to death by some "reasonable" standard (1991, p.288). Typically, unresponsiveness to external stimulation and inability to observe pulse or respiration are common objective criteria.

More recently, researchers, including Kason (1994) and Greyson (1994), have argued for conceptualizing NDEs as being just one of a number of types of "spiritually transformative experiences" (Kason and Degler, 1994) that may occur when physically or psychologically close to death. This view has been adopted by many leading researchers in the field of NDE studies (Kason, 1994). According to this view, pronouncement or even assumption of physiological death is not necessary for an individual to be understood as having had an NDE-like experience. Such phenomena may just as likely occur to those narrowly escaping an automobile accident or to those having death-bed visions shortly before they die (Callanan and Kelley, 1992). However, some NDE scholars do distinguish between NDEs and other "facing-death experiences" (Kason and Degler, 1994, p. 75).

The current criteria for an NDEs, accepted by most NDE scholars, is based on the commonality of elements or stages in an individual’s reported experience which determines whether, and to what depth, they have had a spiritually transformative experience. If the individual is viewed to have been physically or (for some scholars) psychologically near to death, then the term NDE-like experience or NDE may also be used.

Stages of an NDE

Raymond Moody provided the first delineation of a "complete" or "ideal" NDE (1976, p. 21-22). In analyzing more than 150 interviews of individuals reporting an NDE, he identified 15 elements that were common to these accounts (Lundahl, 1993, p.105). According to Moody, these 15 elements of a typical NDE include: (1) hearing oneself being pronounced dead or having
a sense of being dead; (2) feeling a sense of peace and painlessness; (3) hearing unusual sounds such as a ringing or buzzing noise; (4) having an out-of-body experience; (5) feeling time no longer has any meaning; (6) entering a dark tunnel with a bright light at the end; (7) meeting others, often deceased family and friends, and having thoughts communicated to them; (8) encountering a bright, white light which radiates an all-encompassing love; (9) undergoing a life review; (10) having the feeling of being in touch with all knowledge, past and future; (11) entering a city of light; (12) encountering a boundary that may not be crossed if one is to return to the body; (13) returning to one's body, sometimes against one's will; (14) feeling that words are inadequate to describe the experience; (15) feeling less afraid of death and aspects of personality transformation.

Building on Moody's work, psychologist Kenneth Ring's research led him to propose a theory describing a sequence for the typical or "complete" NDE. Ring suggests that there are five stages to the (affectively positive) NDE, with experiencers reaching each stage in a progressive manner. The five stages that have been proposed are as follows: (1) an affective component; (2) an out of body experience; (3) entering the darkness; (4) a white light experience and; (5) entering the light (1980). One or several of Moody's 'core' elements of the NDE may be present in each of Ring's stages. A review of recent research confirms that not all those reporting NDEs "reach" the fifth stage. In fact, NDEs may terminate at any one of Ring's stages (Lundahl, 1993).

In general, Ring's first stage, the affective component, involves a feeling of peace and a sense of well being. No indication is given as to the temporal nature of this (nor any of Ring's stages). Persons describing this stage may indicate that "there is simply no way to describe" the feeling or that they had a "feeling of total peace" with "no sadness, longing or fear" (p. 47, 1980).

(2) The second stage, as proposed, involves the feeling of "detachment" from one's physical body. Many "NDErs" apparently claim they could clearly see their own body for some time just subsequent to their detachment from it (autososcopic perception). Often, such people claim to have been "floating" above their body. Experiencers usually indicated that this separation process felt "natural" with little or "no fear" (p. 50, 1980).

(3) "Entering the darkness" represents Ring's third stage. Here, the "darkness" is often
described as a tunnel which individuals frequently felt they "drifted" or "floated" through. Despite the often employed tunnel metaphor, this stage is repeatedly referred to as being "without dimension" (Ring, 1980, p. 53).

(4) "Seeing the light" is indicative of arriving at Ring's fourth stage of the NDE process. Most often, a brilliant white light" is described, being "of ineffable beauty." Virtually all experiencers felt comforted by and drawn to this source of light which is almost always experienced as an intense feeling of unconditional love. It is interesting that, in a majority of accounts, visions of religious figures were not reported. However, in those cases where they were reported, the all-encompassing light was felt to be radiating from this figure (p.56).

(5) The fifth and last stage outlined in Ring's "ideal" NDE involves entering this white light. Individual reports, perceived by Ring as indicative of this stage, are quite varied and include perceptions of: unforgettable colours; lovely music; being greeted by deceased relatives and; being in "another world, where the light seems to have its origin" (Ring, 1980, p.60). In addition, numerous experiencers believed that they had reached a border or point of no return just prior to being brought back to life on earth. Several of these people indicated that they had either chosen to return to life (often for the sake of loved ones) or were told they were being 'sent back' at this stage, many individuals felt as if they were allowed "just a peak" into what they invariably felt was "the hereafter." Several of those who had wished to stay reportedly expressed explicit resentment, at the time, for being brought back to life (Rawlings, 1979, p. 78).

Moody's and Ring's finding were corroborated by cardiologist Michael Sabom (1982). Sabom also supported the accuracy of the reports of his subjects (NDErs) who reported autoscopic events (viewing one's own body) during the NDE. He noted that patients' descriptions of the specific events occurring in the operating room at the time of their reported NDEs were 'extremely accurate' (1982).

It should be noted that the aspects of NDEs mentioned above reflect generally positive near-death experiences. Although less commonly reported in the literature, negative or "hellish" NDEs have been reported (Rawlings, 1978). This thesis, however, will concern itself with the more widely known and so-called 'affectively positive' NDEs.
Explanations of NDEs

Having given adequate delineation of the NDE in terms of its subjective reality for the experiencer, we now briefly turn our attention toward several of the major explanations that have been presented in an attempt to explain the cause of NDE phenomena.

(a) Gabbard and Twemlow's (1984) investigation confirmed that NDEs are very unlikely to be symptoms of mental illness, since very few people who reported them showed signs of psychopathology. Nor, they claim, do NDEs have much similarity to dreams (1984).

(b) Anesthetics or drugs of any sort have been ruled out by numerous scholars as a potential "cause" of NDEs, partly because this phenomenon has occurred in many situations where anesthetics or drugs of any kind were not used (Ring, 1980, p.211; Habermas and Moreland, 1992, p. 95).

(c) Siegal (1980) asserts that NDEs are a type of hallucination. He cites the work of Grof and Halifax (1977) who suggest that the universal themes of imagery of NDEs may be related to stored memories of the birth experience (including the peaceful feeling of intrauterine existence; the movement down a dark tunnel before delivery etc.). Siegal posits that, since the amount of sensory input getting through to the terminally ill person is "likely to be diminished", this lack of external stimulation may encourage the release of such stored memories (p.920). However, in addition to the numerous ways that many NDEs do not seem to resemble birth memories (e.g., communicating with other 'beings'; floating above one's body etc.), Siegal's argument has other flaws. Many of those reporting NDEs (hereafter referred to as "NDErs") were not terminally ill (e.g., accident victims), and even among those who were, many NDErs report having very vivid sensory input. Some even reported what was being said and done to resuscitate their bodies (Sabom, 1982; Ring, 1980).

Other arguments against the birth experience hypothesis exist (Becker, 1984, pp. 154-62). Becker reviews evidence which indicates that newborns cannot focus on stable patterns well - as is reported by NDErs when they claim to view beings, objects, and landscapes (Moody, 1976; Ring, 1980). As well, an argument is made that babies, prior to birth, wouldn't see light at the end of a tunnel - as is frequently reported by NDErs - due to the normal position of the head during
birth, and to the enveloping nature of the birth canal around the babies body (Becker, 1984, p. 159).

(d) The cerebral anoxia hypothesis, pointing to a lack of oxygen to the brain as the cause of NDEs, represents perhaps the most common physiological explanation previously offered in medical, psychiatric, and lay publications. However, this explanation is also lacking. There exists a significant probability that not all NDE experiencers' brains would be anoxic during the event, and also that widely varying states of oxygen deprivation would likely exist (e.g., those on whom C.P.R. was done versus those on whom it wasn't done). As well, many NDErs report that their experience began suddenly, and was very vivid throughout the duration of the experience. All of these factors are inconsistent with a cerebral anoxia hypothesis. In the first case, at the outset of most of these experiences, the brain would have adequate oxygen levels, so there would be no anoxia impetus to 'float' out of one's body. In the second case, the gradually diminishing oxygen levels in the brain should, according to the anoxia hypothesis, cause mental functioning to diminish or fade over time. However, a great many NDErs, some of whom had been "clinically dead" for several minutes, report the same intense clarity throughout the entire experience (Rawlings, 1979; Moody, 1988; Eadie, 1990; Kason, 1994). In addition, people who have experienced both anoxia and an NDE report that their is an unmistakable difference.

(e) The most common interpretation of the NDE in the psychiatric literature is that they represent a dissociative phenomenon (Irwin, 1993, p. 95).

In general, dissociation involves the separation of mental processes such as feelings, and sensations, from mainstream consciousness. It is thought to be relatively common during very traumatic events. Often NDEs are identified with depersonalization, a type of dissociation which involves an altered sense of self (p. 97). However, as Irwin has pointed out, "it is arguable that, in phenomenological terms, a person having an NDE does not have an altered sense of identity." Many NDErs report very clear impressions of (the same) self identity, although this self identity is no longer associated with current bodily sensations (97). Therefore, depersonalization seems an inadequate description of the processes involved with NDEs.

As proponents of the dissociation model, Ring and Rosing (1990) suggest that NDErs may develop a dissociative coping style due to a traumatic childhood (common among NDErs).
These authors further suggest that those individuals who have NDEs may use dissociation as a response to traumatic (e.g., life threatening) events. However, the NDErs in psychologist Harvey Irwin's (1993) study did not display any difference from non-NDErs in proneness to dissociation.

These defensive psychological reaction theories also have difficulty adequately explaining so called 'negative' NDEs, in which the individual reports a very frightening, often personally terrifying, vivid and detailed experience. Such an experience would be difficult to classify as a psychological defence against the anxiety of death.

Taken as a whole, the current literature does not provide persuasive evidence that NDEs represent examples of dissociation nor examples of wishful thinking.

(f) The theory that the NDE is simply a reflection of our psychological expectation of what death will be like, that it is wishful thinking, also has been shown to be inadequate. One version of the depersonalization explanation of NDEs includes the assumption that NDEs are a product of wishful thinking. However, Moody has indicated right from his initial work on NDEs, that many individuals emphasized how unlike their experiences were to what they had been led to expect based on any discussion they had been exposed to (about heaven etc.) during their lifetime (Ring, 1980, p.209). Additionally, the wide variety of individuals who report NDEs, and the vast number of different 'causes' of their experiences make it seem unlikely that they would all have such relatively similar experiences based solely on some wishful perception of an afterlife.

Ring has outlined several of the difficulties that the previously discussed theories have in providing a valid explanation for the NDE phenomenon. One of the more interesting points raised by Ring is the fact that none of these explanations (at least in their materialist/ reductionist forms) can account for one, albeit rare, aspect of NDEs: the perception of "seeing, on the other side" a deceased relative whom the dying person does not know is dead (Ring, 1980, p.207-209). Without such knowledge before his or her NDE, why would the NDEr see only this person ("on the other side") during the experience, and not others whom the NDEr also presumes to be alive?

(g) More recently, various neurobiological models have been offered as explanations of NDEs. Jansen's (1996) 'glutamate hypothesis of the NDE' details how opiate-like endopsychosins may block the flood of toxic glutamate in a crisis situation. He feels that this blockage, especially
in frontal-temporal lobe sites of cognition and perception such as the hippocampus, could cause NDEs. Jansen's hypothesis is supported by research that shows that, by stimulating the temporal lobe with, for example, the drug Ketamine, some aspects of NDEs can be replicated. Some researchers believe that the psychological stress of believing oneself to be near to one's death may cause the natural stimulation of key centres within this lobe.

Temporal lobe function does, indeed, appear to play a role in NDEs. However, proponents of this theory have difficulty explaining why NDErs should experience intense, positive feelings of calm and love when emotions resulting from temporal lobe stimulation can sometimes be fear, sadness, and loneliness or a less intense positive experience than NDEs.

Chilean researchers Saavedra-Aguilar and Gomez-Jeria (1989) may agree with Jansen regarding some role for temporal lobe firing. They extend Carr's (1984) suggestion that endogenous opioids play a key role in NDEs. They posit that the ventricular surface of the central grey area of the brain is likely involved, since this area contains the brain's highest density of endogenous opioids.

As an extension to their neurobiological model, Gomez-Jeria and Saavedra-Aguilar attempt to explain the mechanism whereby some NDErs are able to recollect real events occurring in their environment during the experience (e.g., what a doctor did or said etc.). They cite Kulli and Koch's (1991) study, which suggests that, during anesthesia, 1 to 75 percent of patients display variable levels of awareness to the environment, although most have no recollection of this upon awakening. According to these authors, the NDEr integrates environmental stimuli, which they believe may be unconsciously perceptible to the individual, into a coherent personal hypothesis, or belief about the events as they are taking place during the experience (1991, p.83). They suggest that the various processes of learning, memory of events, memories of personal beliefs (e.g., religious beliefs) (p.86) and verbal functioning may be operating so that the individual unconsciously creates this memory of events, including visuo-kinaesthetic and verbally created 'memories' (e.g., viewing one's body from above). Aspects of this story are then confirmed by generally surprised observers which reinforces the subjects' belief in the objective validity of all of the 'events' of his or her story (p. 86-87). According to Norton and Sahlman,
such 'consensus' would serve to reinforce one's confidence in the validity of one's still-developing attributions (1995, p. 169).

Cardiologist Michael Sabom (1982) would undoubtedly take issue with Gomez-Jeria and Saavedres-Aguilar's above theory. As previously stated, he found that a number of NDEr accounts of the events occurring at the time of their reported NDE (resuscitation efforts etc.) were, indeed, accurate when compared to hospital records and staff members' recollections. He further stated that many of the specific details provided by NDErs could not have been obtained through guesswork or prior knowledge of CPR. As well, In contrast to Gomez-Jeria and Saavedres-Aguilar, Sabom feels the NDE:

"bears no resemblance to the nightmarish experiences reported by inadequately anesthetized patients. Visual details of an operation are not later retrievable by hypnosis from the subconscious minds of patients who had been anesthetized" (p. 80). Sabom, thus, believes that autoscopic perception may be authentic; that some kind of split between mind and body may occur at points of significant perceived trauma (1982). This perspective does not preclude the possible role of endogenous opioids, nor opiate-like endopsychosins acting in the temporal lobe or elsewhere, in this process.

(h) Psychiatrist Lawrence Wile (1994) begins his article on NDEs by pointing out that:

"ancient mystical traditions, most notably kundalini yoga, describe an anatomical connection with the mystical that closely corresponds to a little known structure in the central nervous system called Reissner's fibro. NDEs and their aftereffects are similar to the experiences described as kundalini" (p. 134).

Wile identifies Reissner's fibre as "a hollow (italics added) glycoprotein fibre, originating from a structure just below the pineal gland called the subcommissural organ, that travels down the central canal of the spinal cord and ends at the terminal ventricle (p. 136). This author's "speculative neural model" postulates that "near-death and other mystical experiences result from direct awareness of the quantum mechanical activity of Reissner's fibre" (p. 134).

Wile's specific postulates on the possible mechanism of action involving Reissner's fibre in NDEs and related mystical experiences are rather speculative, at present, and rest upon recent research in quantum theory, particularly bozon condensation (p. 139-141). While beyond the
scope of this thesis, this line of research may serve to advance our understanding of the neurophysiological processes involved in NDEs and other mystical experiences.

Wile's theory seems to mesh well with other neurophysiological explanations of NDEs. He indicates that the serotonergic neurons originating from the dorsal raphe nucleus are likely to interact with Reissner's fibre (p. 139). The dorsal raphe nucleus, which is the cite of L.S.D. action, has been proposed as playing a key role in NDEs by some authors (Morse, Venecia, and Milstein, 1989). In addition, Wile's model may be in line with the research of Saavedra-Aguilar and Gomez-Jeria (1989) who emphasize the role of endogenous opioids in near-death and related mystical experiences. Wile points out that it is likely that Reissner's fibre interacts with the brain's endogenous opioids, since fibrils from Reissner's fibre contact the ventricular surface of the central grey area of the brain, an area dense with endogenous opioids (p. 139). Hippocampal NMDA receptor blockage by endopsychosins has also been implicated in NDE processes (Jourdan, 1995).

As Wile himself points out, Reissner's fibre, as "the focus of a converging sensory system", could provide a biological basis for Jung and Pauli's theory of synchronicity and mystical experiences (p. 138).

Whether or not his specific postulates on quantum theory and the specific action of Reissner's fibre prove to be correct or not, it does appear that Wile has made a strong case for the involvement of Reissner's fibre in the production and/or perception of NDEs and perhaps other, similar phenomena.

(i) J. Kenneth Arnette (1995) presents an interesting "theory of essence" which, he claims, may solve Descarte's problem of explaining the mechanism for mind/body interaction in his (Descarte's) theory of mind/body duality. Arnette argues that all of the properties of the non-physical body (or "essence, as he terms it) described by NDErs in Moody's (1975) study can be accounted for by his electromagnetic-quantum mechanical model of NDEs.

Arnette proposes that the human being is composed of two parts: body and essence (1992). According to this author, the essence is "that part of the person that survives the death of the body" (p. 80). The essence is believed to be composed of a substance other than known
matter and thus not subject to many of the physical laws of this universe, such as gravity or other constraints on motion.

We may summarize Arnette's theory in the following manner: the essence is believed to be the driving force for cognition, or thought. The essence and the body, via the brain, interact in a similar fashion as two electromagnetic dipoles, each with its own electromagnetic field influencing the other (p. 92). In this manner, "the body detects electromagnetic, auditory, thermal, chemical, and mechanical information and transforms it via the peripheral and central nervous systems into an electromagnetic energy pattern in the brain" from which the essence can obtain (electromagnetic) information.

Arnette proposes that, in some manner, the biological functioning of the body creates an electromagnetic force, which unites the essence and the body together. He reminds us that the neural impulses of our central nervous systems are electromagnetic field pulses (p. 87), and thus suggests that the essence may be a spatially extended electric field (p. 88) which, upon physical death, is disengaged from the body, and may travel elsewhere (p. 80).

Finally, Arnette proposes an experimental test of his theory. He suggests equipping hospital operating rooms with devices that can detect and localize electromagnetic fields. In the event a patient subsequently reports having an NDE (especially if viewing the body from above one's body is reported) such devices could be checked for electromagnetic field changes during the operation.

Arnette's model may prove to be symbiotic with Wile's. It lacks a specific physiological mechanism for action which might be filled by a model similar to Wile's. In a corollary manner, Wile's theory is advanced by Arnette's explanation, as one interpretation of how quantum mechanical principals may be used to explain the mechanism(s) by which NDEs are possible (in this case, from a dualistic perspective, where mind and body are separate entities which interact during life and separate at death).

(j) All of the above neurobiological models may be consistent with the kundalini model of NDEs, which is favoured by many contemporary scholars in the field of NDE studies, including: Greyson (1994), Kason (1994), Ring (1995), and others.
According to this model, kundalini awakening is the biopsychspiritual mechanism underlying mystical experiences, including NDEs (Kason, 1994). Although a complete delineation of the kundalini model is beyond the scope of this thesis, briefly stated, kundalini awakening is “the awakening of latent spiritual energy” (Kason, p. 143). As Kason states:

The basic premise underlying the modern kundalini hypothesis is that there exists a yet unidentified life energy present in all living creatures....This subtle, intelligent life energy vivifies each human cell, and circulates through the nervous system to the brain, providing psychic fuel and the substance of consciousness for our minds. Under certain conditions, a normally dormant potential mechanism is activated (1994, p. 149).

The mechanism, activated by this life energy, leads to central nervous system and brain centre activity, which appears to explain, very well, the physiological and psychological effects which NDErs report during and even much after their near-death experiences. Furthermore, the progression of central nervous system activation, as outlined in the kundalini model, may correspond well with the stages of NDEs as identified by Moody (1976), and Ring (1980). In addition, because the kundalini mechanism can also be activated during meditation or intense prayer, this can explain why people also report NDE-like experiences in non-life-threatening situations (Kason, 1994, p. 156).

It therefore appears that the kundalini model may hold much promise for understanding the processes and aftereffects of NDEs and other mystical or transformative experiences.

(k ) The explanation overwhelmingly offered by those who report NDEs, is that they are genuine glimpses into a life after death (Moody, 1975; Rawlings, 1979, p.45-46; Ring, 1984; Kason, 1994). Despite the apparent subjectivity of the experience, most 'experiencers' are adamant about the very definite objective, if unmeasurable, reality of the event (Ring, 1980; Grey, 1985, p. 72; Harpur, 1991, p. 38; Kason, 1994). Interestingly, the most recent, and theoretically insightful, avenues of explanation for NDEs, such as Wile's and Arnette's theories, as well as the Kundalini model, leave open the possibility that NDEs are, indeed, objectively valid insights into what happens as the human body dies, and, possibly, what happens after bodily death.

Numerous authors such as Maurice Rawlings (1979), Margot Grey (1985), Raymond Moody (1988), Melvin Morse (1993), and Yvonne Kason (1994) report that they have been
persuaded that NDEs represent evidence of some form of survival after death.

At the present time, no comprehensive causal interpretation has been proposed that can unequivocally explain away the NDE phenomenon (Ring, 1984, p.10). This fact lends further support to the argument for regarding NDEs as valid empirical occurrences and examining NDE issues from an existential perspective.

Effects of NDEs

The work of Moody, Ring and others established early on that NDEs seem to have a powerful effect on many survivors (Kastenbaum, 1991, p.318).

In the late 1970's Russel Noyes investigated and categorized the general attitude changes typical of someone who has reported an NDE (1980). Ring (1980, pp. 143-144), Flynn (1982), Greyson (1983), and Sabom (1982, p. 132), have, likewise, identified self-reported changes characteristic of individuals after an NDE.

According to Noyes (1980), the attitude changes reported by NDErs seem to be quite favourable, and include: (1) a reduced fear of death; (2) a feeling of special importance or destiny; (3) a belief in having received the special favour of God or fate; (4) a strengthened belief in continued existence beyond life on earth, (5) a more accepting attitude toward uncontrollable events, and; (6) a sense of relative invulnerability (of the non-physical self, one presumes). To this list Flynn adds: (7) a strongly increased concern for and a desire to help others; (8) a feeling of urgency and reevaluation of priorities including a significant decrease in the value placed on material items, and; (9) more tolerance and empathy concerning others (Flynn, 1982, pp. 3-14). These effects may be most pronounced for people who have had intense, or 'deep' NDEs (Kastenbaum, 1991, p. 318).

This line of investigation is quite noteworthy, in that it provides evidence that attitudes toward life and death may be altered by personally experiencing an NDE. The pattern of attitude change, so described by Noyes, Flynn and others might prove significant in establishing a framework for understanding the attitudes of respondents in this study.
Summary

Despite their suggested long standing prevalence (one-third of those near to death are said to report having experienced NDE-like events: Gallop and Proctor, 1982) academic research into NDEs has only taken place since the 1970's. While often difficult to verify an individual's proximity to death, this research suggests that a wide variety of people reporting NDEs seem to mention a similar pattern of events which may be classified into five 'typical' stages.

At present, no adequate explanation has been developed to fully account for the physical nature of NDEs. However, several promising neurobiological - quantum mechanical models have recently been posited which, being complimentary to the Kundalini model, may serve as a basis for such an understanding. These models neither discount nor champion the possibility that NDEs are objectively valid experiences.

Scholars have noted a number of common after effects in NDErs after their experiences. It is not known whether merely hearing or reading about NDEs would have similar after effects (if any at all). This study aspires to begin to answer this and related research questions.

STUDIES OF THE KNOWLEDGE & ATTITUDES OF SPECIFIC POPULATIONS REGARDING NDEs

As it is used in research literature on the subject, having "knowledge" regarding NDEs refers to being familiar with the most commonly reported features of Near-Death Experiences, including the validity of various explanations and correlates, common patterns of events and stages reported during an experience, and typical after effects.

A review of the literature produced a number of articles examining the attitudes toward, and/or the "knowledge" of NDEs in various populations. Each of these studies is summarized here and key findings are highlighted.

It should be noted that there seem to have been several distinct thrusts in this line of research. The earliest attempts to characterize non-NDErs' knowledge and/or attitudes concerning NDEs were relatively unstructured and non-uniform. A variety of individual questions
were asked, but no validated scales were developed to assess knowledge or attitudes. The statistical analysis of these questionnaires, and the theoretical discussion of the findings were generally superficial. Such early attempts included the work of Oakes (1981), Royse (1985), Hayes and Orne (1990, on research conducted in 1983), and Hayes and Waters (1989).

A second line of research in this area involves the use of the NDE knowledge scale and the NDE attitudes scale developed by Nina Thornburg (1988). These scales, while possessing some imperfections (discussed later), represented the first major attempt to create a widely usable measure (applicable, at least, to nurses) using commonly accepted procedures for instrument construction and validation. Authors using Thornburg's scales or, more commonly, parts of these scales include: Linda Barnett (1991), Linda Hutton Moore (1994); Walker and Russell (1989); and Walker, Bechtel, Chen, and Pierce (1992).

A third, distinct, line of research into non-NDers' attitudes concerning NDEs has been that of Allan Kellehear and colleagues. This research was unique in several ways including: its focus on 'community' attitudes (although not knowledge) concerning NDEs; its direct inquiry into respondent explanations of NDEs, and; its attempt to determine possible respondent reactions to (behaviour in response to) hearing an NDE account from someone they knew.

**Early studies**

**Oakes**

Between 1975 and 1978, A.R. Oakes (1981) investigated the attitudes of 30 critical care and emergency nurses toward "near-death phenomena" (p. 74). These nurses were asked to give their reactions to anecdotal cases involving NDEs. Open-ended responses ranged from complete disbelief and scepticism to fascination and intense interest in learning more about the topic, with "the largest group of survey returns" showing the latter, more positive attitude profile.

This author also points out that "nurses who reviewed NDE cases in which the survivor requested anonymity and confidentiality unanimously admitted their relief of any obligation to pass along the report." Such a statement underscores the fact that these nurses questioned how NDE reports would be received by other health care professionals, and perhaps indicates some degree of personal and/or social scepticism regarding the validity of these reports.
David Royse (1985) gathered information from 174 clergy (70% response rate) from the mid-western United States on their knowledge of, and their attitudes toward "the" near-death experience. A questionnaire was designed by the author, pilot tested, and then slightly revised. Participants were asked to indicate their sources of knowledge about NDEs by stating whether anyone had ever confided an NDE to them, and by indicating which, of a number of popular books on the subject, they had read.

Asking which of a given list of books respondents had read on the topic doesn't allow for consideration of books or articles not listed, not to mention material acquired through the audiovisual media or from courses taken on death and dying. Perhaps respondents should have been asked to list any material they had read on the topic and/or a question might have been included, soliciting from which, of a wider range and types of possible sources, the respondent had received knowledge about NDEs.

Thirteen percent (13%) of respondents in Royse's study reported that they had had an NDE themselves. Although this may be significant, in terms of the respondents' knowledge of NDEs, we do not know how rich these 'experiences' were. Researchers (Greyson, 1994) have shown that depth of NDE is an important variable in terms of attitude changes seen in NDErs.

Sixty-nine percent (69%) of respondents indicated that they believed that "the majority of those confiding an NDE to them were more religious than before they had this experience."

Royse also found that 51% of respondents felt that their own religious convictions had been strengthened by hearing of or reading about NDEs; with two-thirds (66%) of those who had personally heard at least one NDE account having their religious conviction strengthened, compared to only 40% percent who had not personally heard a NDE account. Further, 69% of respondents who had read at least one book on NDEs considered their religious convictions to have been strengthened by the subject, while only 46% of those who had not actually read any books on NDEs considered their religious convictions to have been strengthened by the subject.

Eleven percent (11%) of respondents "frequently", and 48 percent "occasionally" found the discussion of NDE descriptions to be comforting to the dying or to those grieving. However,
only twenty-four percent (24%) of the sample indicated that they introduce the topic of NDEs with the dying or bereaved either "frequently" or "occasionally".

Sixty-three percent (63%) of respondents felt that the best explanation for NDEs (of a number of choices) was that they were "actual glimpses of the afterlife", while 29% felt that the best explanation was "psychological" in nature. Unfortunately though, Royse provides no objective measure of respondents' knowledge about NDEs to which he could relate this finding.

Eighty-three percent (83%) of respondents who had heard at least one NDE described their own fear of death to be low, while only 64% of those who had not heard an NDE described their fear of death to be low.

In terms of comforting the dying and grieving, 73% of respondents who had read at least one book on NDEs, and 73% of those who had personally heard at least one NDE found the topic to be comforting to dying or grieving persons in counselling; as opposed to 50% of those who hadn't read any NDE books, and 34% who hadn't personally heard an NDE -- these respondents "seldom" or "never" found the topic to be comforting to these people.

Hayes and Orne

In 1983, Evelyn Hayes and Roberta Orne (1990) investigated nurses' knowledge of and attitudes toward NDEs. A convenience sample of 1600 was drawn from registered nurses in six acute care and two community health care settings in the Eastern United States. Nine hundred and twelve self-administered, investigator-developed questionnaires were completed, for a response rate of 61%. Ninety-seven percent (97%) of the sample was female and approximately half were less than 29 years old.

Respondents were asked whether or not they were "familiar with the phenomenon NDE". Nurses who were familiar with the phenomenon of NDE were instructed to complete a 20 item questionnaire which "asked questions regarding perception of knowledge, measured extent of knowledge, elicited attitudes about NDE(s), and identified appropriate nursing interventions."

Nurses who were "not familiar with or not sure about the phenomenon of NDE" were directed to read a scenario of the NDE and then respond to questions assessing their attitudes, and then were challenged to indicate interventions such a patient might need.
The authors assume content validity for their instrument, in that persons "knowledgeable" about NDE(s) provided input at every stage in its development. Test-retest reliability conducted with 30 graduate nursing students was 0.91, which was deemed to be satisfactory.

Of the 70% who indicated familiarity with NDEs, 15 perceived the extent of their knowledge to be "extensive" or "very extensive", while 55% perceived their NDE knowledge to be moderate. Total 'actual' NDE knowledge scores were calculated, and 90% of respondents scored 8 or below (out of a possible 16). Hence, the authors conclude that "perceived NDE knowledge of the nurses was not validated by the actual knowledge scores.

Participants were asked an open-ended question which solicited their attitudes toward NDEs. Responses were categorized as: curiosity (50 %); belief (37 %); spiritual (3%); disbelief (3 %); physiological (1 %) and; other (6 %): unfortunately though, the authors fail to mention just what these "other" responses are.

When asked for their interpretation of an NDE, 41% felt it was spiritual in nature, 12% indicated it was a physiological response, 7% interpreted it as a psychic experience (the meaning of which is unclear), and 31% said they simply didn't have any idea.

In terms of their sources of knowledge about NDEs, 40% indicated that the "lay media" (including television, radio, newspapers, and magazines) were their predominant sources. The second most frequently cited source was "patients and patients' relatives", followed by "nursing education", "professional journal or text", "other", and "colleague". Unfortunately, no indication is given of how many respondents reported obtaining information from these sources.

A Pearson product moment correlation was calculated between total 'actual' knowledge score and "attitude" toward NDEs (presumably meaning 'positiveness' of attitude toward NDEs); the correlation was 0.2205, a relatively low correlation but still significant beyond 0.001. However, it is not clear what these researchers used to represent respondents' positive attitudes toward NDEs. Positive attitudes may have been comprised of responses such as "curiosity", "spiritual" and "belief" on the open-ended question probing attitudes toward NDEs. Alternatively, positive attitudes may have been derived from respondents' lists of interventions they would use with NDE patients - with positive attitudes being taken to mean those responses...
that were "judged to be supported by at least 2 persons 'knowledgeable' about NDEs" (although who such "knowledgeable" were remains unclear).

Finally, it may be noteworthy that 96 percent of this (1983) sample did not feel adequately informed about the phenomenon and its implications for practice, and wished to learn more. These researchers maintain that data from their study will facilitate the design and implementation of NDE educational programs designed to meet the needs of nurses and students. This assertion is significant, in that this research thesis may help to indicate whether or not patients believe it to be necessary for nurses to be "prepared and willing to discuss NDEs", thereby offering an indication of the need for such programs for nurses (and others) in the first place.

Hayes and Waters

Evelyn Hayes later co-authored a study with Linda Waters (1989) that examined health care providers' knowledge of, and attitudes toward, NDEs. A self-administered, investigator-developed questionnaire [adapted from the one used in the 1983 study by Hayes and Orne (1990)] was distributed to a combined total of 1,400 randomly selected, registered nurses, physicians, and clergy; 578 usable questionnaires were returned for an overall return rate of 41%. While 68% of solicited nurses returned questionnaires, only 17% of physicians, and 35% of clergy did likewise, limiting our ability to generalize the findings for these latter two subgroups.

Content validity of the revised questionnaire was determined to be "moderately high" by a panel of three "experts" (experts in the study of NDEs, one presumes), but may have been higher in its final form as revisions suggested by this panel of experts were incorporated into it. The questionnaire was pilot tested with a small group of health care providers, and the test-retest reliability coefficient was 0.91. The instrument was judged to be "appropriate" for the study.

As with the study by Hayes and Orne, respondents in this study were asked to complete one of two forms, depending on whether they were "familiar with the phenomenon of the near-death experience." As may be true with other studies (e.g., Hayes & Orne, 1990; Walker & Russell, 1989; Bechtel & coworkers, 1992), there may have been some uncertainty regarding the meaning of a near-death experience; no indication is given by these authors as to whether any
attempt was made to explain or define what they considered "the NDE" to be.

Twenty-five percent (25%) of respondents indicated that someone they knew, either a family member, a friend, or a client believed they had experienced an NDE. Compared to those familiar with NDEs, subjects unfamiliar with them tended to be older, to have been away from formal educational programs for more years, and not to have had formal course work or continuing education courses in death education. No statistical analysis is provided to inform us further about these "tendencies."

In all, 70% of respondents indicated "familiarity" with the near-death experience. By subgroup, 76% of clergy, 69% of nurses, and 66% of physicians reported being familiar with the phenomenon. In terms of respondents' perceived degree of knowledge about NDEs, 18% felt that they possessed "extensive familiarity", while 49% indicated they believed they were in the "moderate" range. When compared to actual NDE knowledge scores (based on 6 questionnaire items), which displayed a mean of 5 out of a possible 16, respondents' estimates of their knowledge of NDEs is regarded as being "exaggerated." In addition, nurses are reported as having scored higher on NDE knowledge than clergy or physicians, although the extent to which they did so is not reported.

These researchers also used an open-ended format to assess NDE knowledge. They asked participants to list as many common NDE features as they could. The most frequently cited feature, listed by 57% of respondents, was 'leaving the body'. Other identified features are listed in decreasing order of frequency. However, no statistical data are given on such frequency. These researchers do mention, though, that, upon "objective questioning", 33% of respondents knew that the most common result described by individuals who have had an NDE is a reduced fear of death.

The lay press (newspapers, magazines etc.) was found to be the most prevalent source of initial knowledge about NDEs, followed by patients who report NDEs. The lay press and professional continuing education programs were cited as the most used sources for acquiring further knowledge in this area.

Seventy one percent (71%) of respondents who were familiar with NDEs indicated that
they had, upon first hearing about NDEs, immediately believed in their validity. By the time of data collection, however, this percentage had grown to 92%. Presumably, the 21% who, over time, came to believe in the validity of NDEs either did so because they came to acquire a greater degree of knowledge about the phenomenon or because they had time to reflect on the NDE material they had been exposed to (and perhaps to incorporate it into their existing conceptions of death), or both.

Respondents associated NDEs most closely with a spiritual-religious event (52%) as compared to a psychological (24%) or physiological (24%) event. The fact that more than 75% of respondents indicated an interest in learning more about NDEs lends support to the authors’ call for the educational programs of health care providers to "expand their offerings related to death education, including NDEs."

**Thornburg-type studies**

In 1988, Thornburg published the first attempt to create a methodologically sound questionnaire for measuring nurses’ knowledge of and attitudes toward NDEs. To develop this instrument, a pilot study was initiated that gathered responses from a convenience sample of 20 registered nurses working within Coronary Care and Intensive Care units of a large mid-western medical centre. Thornburg’s research was actually conducted in 1982 and 1983.

A number of experts from the fields of sociology, psychology, and nursing were used to establish the content validity of the instrument. Internal consistency for the knowledge and attitude portions of the instrument was examined. Factor analysis was performed on the data in order to establish construct validity for the attitude and knowledge sections of the measure. Only questions with a factor loading greater than 0.51 were retained. In addition, Cronbach alpha reliability coefficients were obtained in determining the internal consistency of each subscale obtained from factor analysis.

Resulting factors and their corresponding alpha coefficients for knowledge questions included: knowledge of the NDE itself (0.84); causes and correlates of the NDE (0.77); concomitant events and activities associated with the NDE (0.72) and; knowledge about NDEs'
perceptions (0.72).

A similar scheme was used to analyze these nurses' attitudes toward near-death phenomena and toward care of patients who report NDEs. However, since these scales are quite specifically directed toward nurses, they were judged to not be ideal for the purposes of this study. It should be noted though, that the questions from these scales were reviewed in order to determine whether any were worth rephrasing, and inclusion in the present study. Several questions similar to the ones posed in the attitude sections of Thornburg's instrument had also been independently constructed in developing a preliminary draft of the questionnaire to be used in this study.

In analyzing her NDE knowledge scale, Thornburg assigned a value of 1 for correct responses, and 0 for incorrect and "undecided" responses.

All of the 23 questions kept in Thornburg's final scale appear theoretically sound, with a variety of questions of various levels of difficulty being asked on different aspects of NDE knowledge. The appropriateness of these questions is further underscored by the fact that "experts in the field of near-death phenomena reviewed the items to determine whether they adequately represented the content of near-death phenomena" (p. 228).

Barnett

In 1991, Barnett examined 60 hospice nurses' knowledge and attitudes toward "the" near-death experience using Thornburg's questionnaire (111 questionnaires were distributed, for a 54% return rate). In terms of their knowledge of NDEs, Barnett found that 52% of respondents answered 12 or more of the 23 NDE knowledge questions "correctly" [i.e., they correctly identified common components, correlates, and after effects of a 'typical' (see Ring, 1984) NDE]. This author does not provide, in the published synopsis of her study, an average NDE knowledge score for her respondents.

Barnett comments that "of those nurses who were adequately knowledgeable about NDEs (ie. scored 12 or more out of 23), the majority could identify 'the' components of the NDE" (p. 229). Unfortunately, there is no analysis provided of which or how many components of the
NDE (presumably meaning Moody’s 15 elements of the typical NDE) these "knowledgeable" respondents could identify. The results of such an open-ended question -- asking respondents to outline what they know about NDEs -- may provide us with both an additional mechanism for assessing respondents' NDE knowledge, and with a means with which to assess the accuracy of the knowledge scale of Thornburg's instrument.

The mean NDE attitude score in this study was 92 out of 125 (25 - 5 point Likert scale questions), with all 60 respondents indicating a "positive attitude" by scoring over 69.

Moore

In 1994, Linda Hutton Moore (previously Linda Barnett), conducted a similar study on the NDE knowledge and attitudes of physicians in a South-Western U.S. city. 'Modified' Thornburg NDE knowledge, and NDE attitude scales were used, wherein certain unspecified questions were omitted from the original Thornburg scale, and certain other questions were added. No rationalization is given for these changes.

Of the 1275 questionnaires mailed to physicians, 143 usable responses were returned for a very low response rate of 11%. A vast majority of respondents were male (88%), and most reported affiliation to Protestant (52%), or Roman Catholic (31%) faiths. Level of religiosity is not indicated.

Many of these physicians (51%) reported caring for a patient who had had an NDE, and some (13%) reported having had an NDE themselves. It is highly likely that one or both of these factors was a motivating force behind their participation in this study. The high percentage of those expressing close contact with NDErs, coupled with the low response rate (11%) leads one to suspect that the respondents who took part in this study may not have been representative of the general population of physicians in this geographical area.

In terms of NDE knowledge, 16% of participants were found to "have a well-grounded knowledge base", meaning they "correctly" answered 11 or more out of 15 NDE knowledge questions. The mean score for all participants was 7.4, with a range from 0 to 14.

With respect to NDE attitudes, 65% revealed a "positive attitude toward the NDE", scoring, on average, 3.5 or higher on each of the 25 Likert scale questions. The mean score for
all participants was 3.64, with a range from 2.5 to 4.76. Among the more interesting findings here, was that "a majority of physicians felt that patients reporting NDEs actually have these experiences", indicating belief in the objective validity of NDEs, and that "the majority of physicians also reported that courses should be offered for health care professionals."

Walker and Russell

Walker and Russell (1989) conducted a study to assess psychologists' knowledge of and attitudes toward near-death phenomena. Three hundred and twenty-six (326) questionnaires were distributed to randomly selected psychologists registered with the state of Illinois Department of Registration and Education; 117 questionnaires were returned for a 36% return rate.

These researchers used a modified version of Thornburg's (1988) instrument. Such modifications were intended to make the questionnaire easier to code and more applicable to psychologists. In an attempt to increase the construct validity of the knowledge scale, five of the questions from Thornburg's knowledge scale with relatively lower factor loadings were omitted. No new factor loadings were produced, however (Walker, Personal Communication, 1994). The mean knowledge score was 7.5 out of 18, with a range from 0 to 18. As well, 19 percent of respondents reported being told of NDEs personally by clients, and a total of 28 percent indicated having had personal contact with an NDEr.

Walker and Russell also asked respondents to "describe what a near-death experience is", in their own words. In answering this open-ended question, respondents most often mentioned out-of-body transcendence, and tunnel/light phenomena. However, these researchers report that "many" respondents, in their written descriptions of NDEs, mention only one of the 15 elements described by Raymond Moody as comprising the "core" experience.

Findings from the two methods of analysis, Thornburg's scale and an open-ended NDE knowledge question, are taken by these authors to mean that respondents were "familiar with the term NDE" (in fact 88% indicated as much), but may have lacked a comprehensive understanding of the subject.

No significant differences were found between male and female respondents either on
knowledge or on attitude scores. These researchers found a positive correlation between (Thornburg) NDE knowledge scores and (Walker and Russell - modified - Thornburg) attitude scores of all respondents (r = .54, p < .0001).

Seven percent (7%) of respondents claimed to have personally had an NDE, 19 percent (19%) confirmed having counselled clients reporting them, and 28 percent indicated having had personal contact with an NDEr. Neither NDE knowledge nor NDE attitude scores were significantly correlated with any of these three variables. Nor were there any significant differences in knowledge and attitude score based on age nor gender.

Walker, Bechtel, Chen, and Pierce

Walker later joined Bechtel, Chen, and Pierce (1992) in examining the NDE knowledge and attitudes of clergy. Of the 2722 questionnaire as randomly distributed, 320 were returned, for a response rate of only 12 percent. The questionnaire was virtually identical to the one used by Walker and Russell in an earlier (1989) study, again including the use of modified versions of Nina Thornburg's (1988) NDE knowledge scale and NDE attitude scale. The mean knowledge score was 7.8 out of 18, with a range from 0 to 15.

Approximately 10 percent of clergy surveyed claimed to have personally had an NDE, 48 percent affirmed having counselled parishioners who reported NDEs, and 41 percent knew a close family member or friend who believed they had had an NDE.

A Pearson correlation coefficient indicated that the total (Thornburg scale) knowledge score was significantly related with: having heard of NDEs (r = .36, p = 0.0001); having had an NDE (r = .23, p = 0.0001); having counselled parishioners who had had an NDE (r = .21, p = 0.0002), and; having a friend or family member who had had an NDE (r = .18, p = 0.004).

A positive correlation was found between knowledge scores and attitude scores (in which a greater score indicates a more "positive" attitude toward NDEs) of all respondents (r = .21, p = 0.0002).

With respect to correlates of NDE attitudes, a Tukey test revealed a significant difference (p < .05) was found between female and male perceived "importance of the NDE", with females
believing the phenomena to be more important. A Tukey test showed that religious affiliation was also significantly (p < 0.03) related to respondents' perceived importance of NDEs, with those of "Eastern faiths" displaying the highest opinion in terms of the importance of NDEs (p. 168). Fifty percent (50%) indicated that they would attend an "NDE program" if one were available to them in the future, although the exact meaning of this term remains somewhat ambiguous. Finally, the authors mention that subjective comments indicated that there was a wide range of feelings expressed toward the NDE, ranging from curiosity and fright to fascination, questioning and disinterest.

**Studies by Kellehear and colleagues**

Kellehear and Heaven

In 1989, Australian researchers Kellehear and Heaven conducted a survey of Australian community attitudes toward NDEs. Undergraduate students were asked to distribute surveys to adults from as wide a variety of socioeconomic status and age grouping as was possible.

One hundred and seventy-three (173) questionnaires were returned, although these authors make no mention of the number of people asked to participate in the study and, hence, no response rate is given. According to the returned questionnaires, 114 (65% of the 173) respondents were between 18 and 40 years of age, with approximately 95% possessing at least some secondary education. Seventy-nine percent (79%) of respondents were familiar with the NDE from newspapers, books, or magazines, and 10 percent of the sample claimed to have had a personal experience "similar to the one described in this study." Sixty-nine percent (69%) of respondents indicated a belief in "life after death."

Respondents were asked to read a brief vignette (written in the third person, rather than a quote from an NDER) of a "typical" NDE, and then to choose one of a number of one-line explanations that they felt best explained the nature of the account. These explanations were compiled using the literature as a guide. Some 57.8% of respondents chose the explanation that the account was "possible evidence of life after death", while 17.9% reported that they "don't know how to explain it." Less than 2% felt "it is the beginning of a mental illness." The authors
took these findings as evidence that a majority of respondents in this sample would not judge an individual reporting an NDE in a negative fashion, although, they added, a sizable minority may.

A further list of statements, representing a range of possible social reactions to a person recalling an NDE was also compiled. Included were positive statements, negative statements, and neutral statements which had been validated by 20 undergraduate students who were asked to comment on the clarity, and on the affect of the statements (i.e. whether they clearly identified the statements as being affectively positive, negative, or neutral).

In the study, respondents were asked to circle four statements that might best describe their reaction to a person recounting such an experience to them. Negative statements were scored as zero, neutral statements as one, and positive statements as two. The mean score was 6.15 (out of a maximum score of 8), with a standard deviation of 1.5. Data analysis showed that "positive" reactions (i.e. higher scores) were significantly correlated with gender ($r = .21, p< .01$), age ($r = -.21, p< .01$), and a belief in life after death ($r = .30, p< .001$). Females, younger persons, and those with a belief in life after death were more likely to react positively to the NDE story.

These researchers caution that the findings of this study must be placed in the proper perspective. In particular, they underscore the fact that one in four respondents maintained that the NDEr might be hallucinating, dreaming, imagining things, or experiencing the side effects of drugs. Thus, reactions that are quite unacceptable to NDErs may still be encountered often.

Kellehear, Heaven, and Jia Gao

Findings of a similar investigation by Kellehear, Heaven, and Gao, in a survey of Chinese attitudes toward NDEs, were published in 1990. Completed questionnaires, similar to the one used by Kellehear and Heaven (1989), were returned by 197 people. Again, no mention of response rates is given, making generalizations to the community-at-large impossible.

Approximately 56% of respondents were between 18 and 40 years of age, and 37% were between the ages of 41 and 60 years of age. In terms of educational background, only 33.5% of respondents had attended high school or a higher level of education. Thirty-one percent (31%) of respondents were familiar with the NDE from newspapers, books, or magazines, and 24% from
television, radio, or movies. In addition, 13 percent of respondents claimed to have had an experience "similar to the one described in this survey." However, only six of these 26 individuals chose to explain the vignette as possible evidence for life after death.

As with the Australian study, the vignette of a typical NDE again included five main elements: (1) tunnel sensation; (2) out-of-body experience; (3) meeting deceased acquaintances; (4) meeting a bright light, and; (5) experiencing a life review. Analysis of the preferred explanations for the NDE revealed that 38.9% of respondents believed that "it was a passing hallucination", and 19.2% felt that "it was a dream", while only 8.6% indicated believing that "it was possible evidence for life after death."

Only 145 respondents completed the task of choosing four statements (from a list of 12) which might indicate their social reactions to a person recounting an personal NDE to them. Again, negative statements were scored as zero, neutral statements as one, and positive statements as two. A maximum score of 8 was taken to mean "a most supportive and facilitative response", while a minimum score of zero was taken to indicate a "rejecting and dismissive attitude." Data analysis revealed that the mean score on this section was 4.64, notably lower than the 6.15 for the Australian sample.

Unspecified "Linear correlations" demonstrated that "positive" reactions to NDEs was significantly negatively correlated with age (r = -.16, p < .01), and living in an urban area (r = -.15, p < .05). Thus, rural and younger Chinese are more likely to have a positive attitude toward NDEs. However, mean Chinese' NDE attitudes were less positive than Australian attitudes.

In comparing these findings to those of the Australian sample, these authors implicate the Australian sample's high level of familiarity with NDEs (79% as compared to 31% for the Chinese sample) as a possible factor for explaining the more positive attitudes toward NDEs displayed by the Australians (6.15 as compared to 4.64 for the Chinese sample). It is also possible that, since surveys in China are usually conducted by government officials, many respondents may have wished to appear "ideologically sound", and not respond positively toward anything associated with religion or superstition.
Ring

In 1995, NDE researcher Kenneth Ring published an article entitled "the impact of Near-Death Experiences on persons who have not had them." In this article Ring presents the results from three informal surveys on NDEs, completed by students enrolled in college courses.

First, however, Ring reviews certain findings from his "Omega Project" (1992), in which he examined "the pattern of belief and value changes" in 74 NDErs and "54 non-NDE experiencers who were known to be interested in NDEs." Ring reports that many of the nonNDErs "showed many of the same effects as NDErs, though the magnitude of these changes was usually somewhat less than for the NDErs." Specifically, these non-NDErs claimed that, as a result of exposure to NDE information, they, too, had become: more appreciative of life; more self-accepting; more compassionately concerned for others; more spiritual, and less materialistic (p. 225). One of the problems in interpreting the above results is that the 54 nonNDErs were, to reiterate, "known to be interested in NDEs." It would not be surprising to find 54 individuals who were affected by this (or many other types of material), and their special status precludes us from generalizing these findings to the general population.

Ring/Young

With respect to the college course surveys, two were conducted by Ring himself at the University of Connecticut, and the other was conducted by Victoria Young at Montana State University. Each survey took place in 1993. Since first offering a course on NDEs at the University of Connecticut, Ring had noted "that many students gave clear indications that the course (had) had a strong and positive effect on them." At the end of the spring semester of 1993, however, Ring finally decided to have his students complete questionnaires regarding the impact the course had had on them.

Of the 28 students who completed the questionnaire: 96% said they were "now more convinced of the authenticity of NDEs"; 71% reported their fear of death had decreased; 82% claimed they "now had a more positive view of death"; 82% indicated they were "now more convinced of some form of conscious existence following physical death"; 61% felt that, as a
result of taking the course, they had become more spiritually oriented, and; 68% were more convinced their own life had a purpose.

Any analysis of these findings must take into consideration the process of cognitive dissonance. Simply stated, students who had spent time and effort completing such a university course as this would be expected to feel that they had gained something from the course (e.g., a new appreciation of NDEs etc.), otherwise they wouldn't have expended the effort required. A demand effect is also a strong possibility in Ring's method of analysis. Students may have correctly assumed that their professor had hypothesized that his course would bring a positive change in attitudes toward NDEs and so answered the questionnaire accordingly.

The results from the other two surveys were very similar to the one outlined above. From this data, Ring asserts that "these students expressed sentiments, feelings, values, and beliefs that are indistinguishable from those commonly uttered by NDErs themselves" (p. 233). This author further announces, "it is as if the benefits of the NDE can be transmitted vicariously simply by exposing individuals to materials on the subject." However, he does admit that we do not know how indicative of deep-lying changes these students sentiments may be, nor how long lasting such sentiments may be.

Ring concludes his article with an explanation of his suspicion that "the single most important influence in shaping students' reactions was the direct, in-class appearance of the NDErs themselves." Although this method of presenting NDE information hasn't been used in any scientific studies of NDE attitudes to date, this statement is relevant to this line of research because it raises the question of whether the various media of NDE information have different effects on the attitudes of the audience.

Our ability to generalize Rings' findings remains low. Beyond the small sample sizes and restricted age ranges of these studies, the strong possibility exists that the students who enrolled in these courses, may have already had positive attitudes regarding NDEs, or at least, may have been more open to them. Indeed, as Ring admits, "strong sceptics or outright debunkers were relatively rare" (p. 228).
Summary

Research into the NDE knowledge and attitudes of non-near-death experiencers (non-NDers) has progressed since the non-uniform and less-well analyzed studies of the early 1980's. In fact, two more substantial, yet distinct, thrusts have emerged in recent years.

In one research thrust, researchers following the work of Thornburg (1988) utilize NDE knowledge and attitude scales that were created using methodologically accepted scale construction and validation procedures. In all five studies to date using Thornburg's scales, the target sample has continued to be health care professionals.

In the second research thrust, Kellehear and colleagues have chosen to focus on 'community' attitudes toward NDEs and, specifically, on individual's explanations of NDEs as a means to predict their behaviour in dealing with someone (theoretically) recounting a personal NDE to them. These researchers have developed their own assessment tools for this purpose.

In terms of NDE knowledge, Thornburg-type studies of health care workers all suggest that a vast majority of these professionals had heard of NDEs, usually through the audio-visual media. Most reported, though, that they could not explain how or why NDEs occur. On average, respondents displayed a moderate amount of NDE knowledge. Typically they would correctly answer between 40 and 50 per cent of Thornburg's true or false questions. However, these same respondents only outlined one or a few of Moody's 15 "typical" elements of an NDE, often including only one or two of the following: a peaceful out-of-body experience; a tunnel, and; a bright light.

Though only calculated in a few studies, several factors were associated with more knowledge about NDEs. These factors included: (1) life experience, such as having had an NDE, and knowing someone who has had an NDE; (2) age, with younger persons in some studies displaying somewhat more NDE knowledge; (3) degree of religiosity/spirituality, at least as measured by belief in some form of life after death, which was often associated with more NDE knowledge, and perhaps; (4) culture, as one study showed much higher awareness of the term
"NDE" amongst an Australian sample than was true for a Chinese sample. The correlations between these factors and NDE knowledge were only low to moderate, however: typically in the 0.2 to 0.3 correlation range. Gender, education, and type of religion were not significantly associated with having more NDE knowledge in any consistent manner.

In summarizing the findings on NDE attitudes from both the Thornburg-type studies and those by Kellehear and colleagues, several points may be made. As with NDE knowledge, more positive NDE attitudes were demonstrated by younger, Western (Australian as opposed to Chinese), respondents who believed in some form of life after death. A more positive NDE attitude was also displayed by females. When given, the correlations between these factors and positive NDE attitudes were in the 0.2 to 0.35 range. Education and type of religion were not significantly associated with having more positive NDE attitudes in any consistent manner.

While a wide range of attitudes have been noted in these studies, analysis of open ended questions has identified four dimensions along which NDE attitudes may be classified: (1) interest; (2) belief; (3) importance, and; (4) fear. Although the latter two dimensions have not previously been measured by the research in this area, several studies have shown that many respondents were interested in knowing more about NDEs and a large percentage believed they were objectively valid experiences.

Three studies have measured the correlation between NDE knowledge and NDE attitudes of samples using Thornburg's scales. Two studies found fairly low correlations in the 0.2 range, while one study found a relatively high correlation of 0.54.

A sense is beginning to emerge regarding the extent of knowledge and the types of attitudes that we, in Western nations, have concerning Near-Death Experiences. What remains less clear is whether NDE knowledge and attitudes are closely linked, and whether non-NDEr's attitudes towards death are strongly - or at all - affected by reading or hearing about NDEs.

The next section will examine factors that are known to be correlated with death attitudes.
Correlates of North American Death Attitudes

As it has been used throughout this thesis, the term "attitude" refers to the cognitions (ideas and beliefs) held and emotions elicited in response to a particular topic such as death, NDEs etc. "Attitudes", as it is used here, does not refer to behaviour. With respect to the various kinds of life and death attitudes referred to in this thesis (e.g., death threat etc.), such attitudes are defined in the Instrument and Survey Question Design section of the Methodology chapter.

Understanding which variables are known to effect death attitudes is relevant to this study for a number of reasons. Possessing such an understanding would help us to deduce the degree of impact, if any, NDE information may have on death attitudes (i.e., if effects are shown beyond, or especially, contrary to, known trends - discussed below). In addition, by comprehending the degree and manner of impact these variables have on death attitudes, we may be better able to analyze and explain their impact on NDE attitudes. This should help us to incorporate findings regarding NDE knowledge and attitudes into a theoretical framework of death attitudes and the possible changing meaning of death in North American society.

In light of the difficulties in assessing and interpreting death attitude research (see methods section), we must remain cautious when generalizing the effects of variables which studies have shown to impact upon the death attitudes of North Americans. It is important to remember that the literature in this area is mainly comprised of studies which lack theoretically grounded, multidimensional death attitude measures, which often have inadequate sample size and diversity, and which often attempt to investigate somewhat ambiguous concepts (e.g., "death anxiety" etc.). Nevertheless, some generalizations may cautiously be offered.

The most salient factors effecting death attitudes, which have been uncovered in death attitude studies over the past 30 years include: (1) age; (2) gender; (3) socio-economic status; (4) type and degree of religiosity; (5) culture; (6) personality, and also; (7) life experience.

It is with the impact of life experience in mind that some have suggested that exposure to material about NDEs might influence life and death attitudes, perhaps by confirming life or death's meaning and/or one's own perceived purpose in life. This research thesis attempts to begin to answer these and related enigmas.
Age

Kavanaugh (1974) and others (Stillion, 1985, p. 6, Kalish, 1985, p. 95) have pointed out that our present attitudes toward death were probably largely formed at an early age. According to some scholars, children begin the search for a set of beliefs, apparently encompassing death-related beliefs, during their elementary-school years (DeSpelder and Strickland, 1983, p. 236; Kavanaugh, 1974; Leming and Dickinson, 1985, p. 106-7).

Kastenbaum (1991), in reviewing the research literature, reports that:

"death anxiety tends to rise in adolescence and early adulthood then diminish somewhat as one's life becomes more settled and predictable. Death anxiety is apt to rise again in later middle age, perhaps occasioned by the death of friends and family and the signs of one's own aging" (p.20; see also Marshall, 1980, p. 76),

and the realization that one's idealized self may never be achieved (Leming and Dickinson, p.123). Middle age may also represent a time when "one becomes increasingly aware of the dying process, and also the meaning of absence to those who depend upon us (p.123). It may, further, be a time when the ongoing effort to complete plans and projects make death a particularly negative connotation (Cable, p. 12; Marshall, 1980, p. 77).

In support of Kastenbaum's analysis, research studies are indeed available which indicate that middle aged persons (approximately 40 to 55 years of age), as a group, express more fear of death than other age groups (Bengtson, Cuellar, and Ragan, 1977; Gesser, Wong, and Reker, 1987), or were more negative about discussing death issues than were other age groups (Kalish and Reynolds, 1976; also see Karel, 1989, p. 464). Although some research has failed to detect a difference in death fear or anxiety between middle aged and younger adults (Thorson and Powell, 1994).

In a broad study of various Los Angeles ethnic groups published in 1976, Kalish and Reynolds found an inverse relationship between age and "fear of death" (own death, presumably). Although few participants of any age reported being very afraid of death, some age differences were found. These authors found that elderly respondents (defined, in this 1976 study, as those over age 60) admitted to more preoccupation with the subject, yet were less likely to indicate that they were afraid of (their own) death (only 10% claimed they were), and were more likely (71%) to indicate that they "are able to face dying."

These findings are in line with Butler's (1961) theory of life review and Erikson's (1982)
theory of psychosocial stages. In both of these theories, individuals passing middle age become more likely to reminisce about and review their own lives, perhaps to search for some meaning in it, knowing the end of their lives is now on the horizon. One possible impetus for life review among the elderly might be the fact that, as was found in Kalish and Reynolds's study, the elderly "encounter" death more, largely because many have spouses and/or friends who have died. Indeed, 80 per cent of deaths in (North) America occur among those 65 years of age and older (Kearl, p. 467). In addition to being forced to deal with these deaths emotionally and psychologically, the elderly also attend funerals and visit graves more frequently than their younger counterparts (p. 71).

Like Kalish and Reynolds, Templer (1971) also found that older adults (aged 60-83) had significantly lower death anxiety scores than did younger or middle aged adults. Other research has supported these findings (Bengtson et al., 1977; Kastenbaum, 1991, p. 20; Kalish, 1976; Keller, Sherry, and Piotrowski, 1984; Thorson and Powell, 1994; Wong et. al., 1994). In a more specific identification of the fears of the elderly regarding death, Thorson and Powell (1988) found that this group had significantly higher fear, than did younger adults, over issues of loss of control, and the existence of an afterlife. Younger adults, these authors noted, displayed higher death fear over issues such as uncertainty, helplessness, pain, and isolation.

Disengagement theory suggests that the elderly become less intimately involved in the functioning of our society through disengagement from their former social roles in the areas of work (via retirement), familial obligations, and the like (Cumming and Henry, 1961). For society, this may represent a way of lessening the impact of that individual's death, while providing an opportunity for upward mobility among younger members. For the individual, such disengagement supposedly allows one to relinquish responsibilities which might be becoming overly physically and/or mentally taxing to an aging body (Kearl, p. 125).

In addition to undergoing some degree of life review and disengagement from social roles, other possible reasons that many elderly subjects report less fear of death might include: the fact that the elderly are closer, temporally, to death, and the fact that they often have had greater exposure to death, through the deaths of parents, siblings, and friends; the notion that they are more likely to have achieved goals and that, therefore, death becomes less of a loss for them, and the fact that; physical impairments, or otherwise lower quality of life, including loss of opportunity to engage in meaningful activity, might make death less unwelcome (Stillion, p.57).

With respect to the fear of physical degradation and/or the fear of being a burden, Kearl states that, "it is helplessness, not death, that is the elderly's chief fear" ( p. 125). To this Marshall might add that it could also be the physical pain or discomfort of dying, or the loss of mental faculties that the
elderly fear (1980, pp. 170-76).

In examining results using Wong, Reker, and Gesser's Revised Death Attitude Profile, the data suggest that older adults tend to express greater escape-acceptance of death (viewing death as a welcome escape from the burdens of life), and also higher approach-acceptance (accepting death as a pleasant afterlife). The former finding may reflect the loss of social roles (and hence fulfilment), the physical discomforts, and/or the social isolation and loneliness often associated with old age. Higher approach acceptance is in line with data showing that the elderly generally have a greater belief in an afterlife (Keller et. al., 1984) and that they are more religious than other age groups (Bengtson et. al., 1977). Gesser et. al. (1987) found that older individuals also showed greater neutral acceptance (neither fearing nor welcoming one's own death). The greater degree of escape, approach, and neutral acceptance found among the elderly are in line with Erikson's (1963) notion that the key developmental task of the elderly is to accept one's past life and the reality of death.

Scholars point out that, contrary to popular belief, the elderly tend to be more diverse in their death attitudes than any other segment of the population (Stillion, 1985, p. 56). Stillion attributes this to the fact that the elderly have had more years to increase their individual experiences. However, it may also be partly explained by methodological flaws in most studies on this topic; since most tend to lump together people over a large age range (i.e. from 60 to 90+ year olds) without regard for their likely varying physiological and psychological functioning, nor any cohort differences (p. 56) in life experiences, values etc. Indeed, Devins (1979) found more death anxiety among the old-old (75+), than in the young-old (60-75 years of age) in a nursing home population.

Not all data suggest a clear relationship between age and death attitudes. In fact, several studies have found no significant correlation between age and death anxiety (Lowenthal et. al., 1975; Rhudick and Dibner, 1961). As well, research findings may prove difficult to interpret, since older persons are more likely to be religious, a factor which has, itself, been shown to affect death attitudes (Leming and Dickinson, p. 129).

Without copious longitudinal data, it is difficult to distinguish the degree to which the differences in death attitudes across age groups is a result of aging, per se, as opposed to each age cohort having been exposed to different life events etc. (although Marshall suggests that aging "probably does have something to do with these changes" (1980, p. 78)). Despite this analytic drawback, it is apparent that the aforementioned differences in death attitudes do exist at the present time, thus making age a salient feature to consider when analyzing the results of this research thesis. In particular, any uncovered links between NDE knowledge and/or attitudes and death attitudes should be examined to note whether age plays a causal role in any such linkage.
Gender

Judith Stillion points out that gender-based beliefs and behaviours regarding death are part of a burgeoning understanding of gender identity in the developing child (1985, p.3.). By modeling the behaviour of men and women, children frequently observe differential reactions from males and females; these gender-based, acceptable reactions are socially sanctioned and, thus, are socially learned. Despite some gender differences in “permissible” death attitudes and behaviour (e.g., more overt anxiety, and grief permitted for females), children also often learn that death is a subject both genders want to avoid. (Stillion, 1985, p. 6; Ezell et. al, 1987, p. 5)

Stillion identifies several stereotypical male attitudes in the face of death and suggests how these might translate into different death-related behaviours for males. For example, in keeping with a desire to be inexpressive, and to keep a stiff upper lip when dealing with death, males may be less willing to admit death anxiety than females. Indeed, numerous studies indicate that females express significantly higher death anxiety than males (Berman & Hays, 1973; DaSilva and Schork, 1984-85; Iammarino, 1975; Pollak, 1979; Thorson, 1977; Thorson and Powell, 1994; Templer, Russ, and Franks, 1971), even among the elderly (Sanders, Poole, and Rivero, 1980).  

Why females generally indicate more death anxiety than males remains unclear. Gender differences in longevity and differing familial roles may account for some of the differences in death-related attitudes and behaviours (Stillion, 1985, p.7). Some authors have suggested it could merely be due to females being allowed to socially express their anxiety more so than males, as Stillion suggests in, what other scholars (Neimeyer and Van Brunt, 1995, p. 64) have called, her emotional - expressiveness hypothesis. Indeed, Kastenbaum has even suggested that "what appears to be women’s higher anxiety might be better understood as a greater comfort in thinking about death" (p. 19). In line with this notion is the work of Berman and Hayes (1973), who found that females have a higher belief in an afterlife, and the work of Wong and co-workers who report both that women indicate higher approach acceptance of death, and that men indicate higher avoidance of death thoughts (1994). Studies have also shown that women often indicate a stronger belief in an afterlife (Klenow and Bolin, 1989-90) and higher approach acceptance of death (Wong et. al., 1994).

In spite of the above theories, it remains very possible that females actually might experience more death anxiety than males, particularly regarding the death of others. Some researchers have reported that, for females, death is more strongly viewed as loss, sadness, and/or grief than is true for males (Stillion, p. 50). Others have questioned Stillion's emotional - expressiveness hypothesis since Dattel and Neimeyer's (1990) findings indicated that women's higher expressed death anxiety, as
measured by the Death Anxiety Scale, remained when the effects of social desirability and self-disclosure were statistically controlled.

Not all data point to significant differences between male and female adults in terms of death fear, anxiety, or threat: several studies have found no significant correlation between gender and such factors (Bengtson et al., 1977; Keily and Dudek, 1973; Neimeyer, 1995, p. 62; Rhudick and Dibner, 1961; Swenson, 1961; Wong et al., 1994).

Stillion points out that studies examining gender differences in death-related attitudes and behaviours are rare (p. 45). Those instruments which do detect more anxiety among women, such as Templer's (1970) DAS or Thorson and Powell's (1994) Revised-DAS, tend to be more affect-oriented; whereas those measures which do not detect any gender differences, such as Neimeyer's (1994) Threat Index, tend to be more cognitively-oriented. Any theory of why females generally indicate more death anxiety than males must also take into account the fact that females appear to only have more death anxiety in the areas of what happens to the body after death, and the fear of pain associated with death (Diggory and Rothman, 1961; Thorson and Powell, 1988).

If we are to properly interpret the impact (if any) of NDE information on the death attitudes of the participants in this study, we must remain aware of the differences in death attitudes often found between men and women.

Socio-economic status

Several studies have found decreased levels of fear of death indicated by those with higher levels of education (Berman & Hays, 1971; Kalish, 1985, p.95), even among the elderly (Wass, and Sisler, 1979: actually "death concern"). In fact, Riley (1968) reports a stronger correlation between education and views concerning death, than for age and death views.

However, not all data indicate a correlation between socio-economic status and death anxiety. As an example, Rhudick and Dibner (1961) found no significant correlation between socio-economic status and death anxiety. More recent analysis of the research has also failed to show a clear association between occupation (often used as a measure of socio-economic status) and death anxiety (Kastenbaum, 1987-88) nor between social class and fear of death (Bengtson, et al., 1977).

In order to make even very general statements regarding the relationship, for this sample, between NDE information and death attitudes, we ought to examine the socio-economic status (SES) of participants. On an individual level, it is possible that SES, or, at least, education level, might influence the ways both NDEs and death are perceived: any relationship between NDE information
and death attitudes might be attributable, to some degree, to SES. This should be examined. As well, on a general level, the SES of participants in this study should be examined to help determine how representative it is with respect to the overall population it was drawn from.

Type and degree of Religiosity

Some believe that the driving force behind the establishment of the world's religions was the search for answers to questions about death (Ezell, Anspaugh, and Oaks, 1987, p.29; Marshall, 1980, p. 43). Whether or not this is so, it is clear that death and religion are inextricably linked: religion provides us with, among other things, a way to conceptualize and deal with death. At the same time, death may represent a major reason people seek out or maintain religious pursuits, since, as Leming and Dickinson point out, "a major function of religion is to explain the unexplainable" (1985, p. 163).

Kearl argues that religion's control over dying and death meanings and rituals has weakened in our society due to secularization [including the effects of individualism, and materialism (pp. 192-198; see also Marshall, 1980, p. 58)], improvements in health and medical care, and the predominance of natural deaths in old age (1989, p. 170). However, this same author points out that religious affiliation and intensity of religious beliefs (religiosity) remains "highly predictive" of (North) Americans attitudes toward a wide variety of death issues (p. 175). Perhaps this is, in part, because "our society has institutionalized the importance of religion by creating funeral rituals which have a religious quality about them" ( Lemming and Dickinson, p. 142). Apparently, then, for some people, religious "structures" give meaning to death (Ezell et. al., 1987, p. 30).

It is widely recognized that religion continues today to help some people cope with the anxieties related to mortality, usually by encouraging belief in immortality of one form or another (Ezell et. al., 1987, p. 29; Malinowski, 1965, p. 71; Thorson and Powell, 1990). Thomas O'Dea concludes that religious meaning systems provide answers (i.e., meaning) to the universal human problems of uncertainty, powerlessness, and inequality (1966, pp. 6-7). Religion's role in helping many people to cope with death is clear, regardless of whether one's philosophical or religious perspective leads to the belief that promotion of such religious beliefs ultimately represents denial of nonbeing or, conversely, a healthy acceptance of death.

An early study by Jeffers, Nichols, and Eisdorfer (1961) found that factors associated with "no" fear of death included more belief in a future life, and reference to death with more religious connotations. This finding supported still earlier work by Swenson that "fearful attitudes toward death tend to be found in those persons with little religious activity (1961, p. 54), and is in line with work by
Hardt that regular churchgoers are apt to have less fear regarding death and dying than those who do not attend church (1979, p. 2; see also Rigdon and Epting, 1985).

With specific respect to religiosity (strength of religious or spiritual belief) Spilka, Hood, and Gorsuch noted that two-thirds, or 24, of the 36 published studies they reviewed found a negative correlation between intensity of faith and death anxiety, seven did not detect any relationship, and three studies actually reported a positive correlation (1985, pp. 131-132). Leming and Dickinson agree that strength of religious (or spiritual) belief is a significant variable in explaining death attitudes (p. 164). It seems that, when it plays an important role in one's belief structure, Religion helps people cope with the anxieties related to mortality and nonbeing of self and others (Jeffers et al., p. 29-30).

However, not all data support the role of religion or religiosity/spirituality in tempering negative attitudes regarding death (Rhudick and Dibner, 1961). In fact, Middleton found conflicting results: three studies reported that religion had a negative influence in helping people cope with death, five studies reported a very positive influence, and four studies found no significant correlation between religion and death-related attitudes or behaviour (cited in Hardt, 1979, pp. 5-12, 21).

To further confound the situation, Hinton found that dying patients with no religious beliefs at all exhibited less death anxiety than did patients who had only weak or moderately strong religious beliefs (cited in Hardt, 1979, pp. 20-23).

In keeping with Hinton's findings, Leming's (1979-80), and also Downey's (1984) studies both confirmed Homan's (1965) theory of a curvilinear relationship between religiosity and death anxiety. Similar findings have emerged from studies assessing death threat, as measured by the Threat Index (Ingram and Leitner, 1989) it seems that persons with only a moderate commitment to (Judeo-Christian) religion, have added to the general anxiety or death threat which has been socially ascribed to death from secular sources. These persons display higher death anxiety or death threat on self-report measures than do persons who indicate they are nonreligious. This may be due to fear of an unfavourable fate after an assumed post death judgement (Leming and Dickinson, 1985, p. 144) and due to vivid conceptions of judgement and hell (Ezzell, 1987, p. 32; Toynbee, 1980, p. 35). The lowest death anxiety scores are reported by those who are very religious (Leming, 1979-80; Thorson and Powell, 1994), perhaps because they are more confident in a favourable "review" after death. Neimeyer summarizes this line of research by suggesting it appears that "philosophic integrity, rather than religiosity per se, allows an individual to construe death as a non-threatening personal reality" (1994, p. 86).

It was expected that the association between religiosity, NDE attitudes, and death attitudes would be quite strong. In part, this is due to the fact that persons reporting NDEs (NDEs) almost all
indicate an increased sense of spirituality after the event (Ring, 1980). We assume this would lead to strengthened religious beliefs as well. Also, though, a strong association between these three elements was expected because NDEs suggest that there is life after death. Since our only framework in which to conceptualize the issue of life after death has been traditional religion (or emerging spiritual practices), it is natural to expect attempts to reconcile these two issues (NDEs and religion/spirituality).

Culture

Webster's dictionary defines culture as "the customary beliefs . . . of a racial, religious, or social group" (1988, p. 314). In general, we might think of culture as a collection of shared meanings, including beliefs, symbols, and values (Marshall, 1980, p.3). As a subsequent section will address the issue of modern meanings ascribed to death in North America, only general statements regarding culture will be made here.

Kastenbaum informs us that cultures may differ in their "death systems", including the type of people, places, times, objects, and symbols that are involved in the many processes surrounding dying and death (1991, p. 58-62). According to this author, world cultures' death systems vary in the manners in which they attempt to: warn about death; prevent death; care for the dying; offer social consolidation after death, and; make sense of death (1991, p. 67).

Arnold Toynbee (1980) has contrasted "Western" and "Eastern" cultures, on a number of levels, with respect to their differing orientations to life and death. He classifies cultures: (1) as being death-accepting or death-denying; (2) as viewing death as the end of existence or a transition into another state of being or consciousness; (3) as viewing an afterlife as being either personal or collective (i.e., the continuation of one's personal self versus impersonal oneness with the universe), and; (4) as regarding either life or the afterlife as being the real illusion.

Cultural conceptions of death are tied closely into the belief structures of the society, which are often founded upon religious beliefs. Long (1985-86) concludes that "many of the specific fears associated with death in a Western Christian culture (e.g., fears of the unknown or being destroyed) may not be applicable to members of a (Saudi Arabian) Islamic society."

Christianity, and, particularly, Protestantism, played a key role in shaping present day North American views of death (Marshall, 1980, p. 28-9). As an example, Ezell and coworkers point out that (North) Americans are guarded about showing emotion in response to death (1987, p. 3). This was found to be true even across American minority cultural groups (i.e. among, Black, Japanese and Hispanic Americans: the inference being that non-Anglo cultural groups would not likely have
displayed this reaction without the influence of mainstream U.S. culture) (Simpson, 1979, pp. 71-73).

As is typical of cultures so heavily influenced by Protestant ideologies, personal stoicism and private grieving when facing death are apparently still valued in North America. The present day influence of the Judeo-Christian religious tradition on our culture's death attitudes is more fully elucidated in the subsequent section, "the social construction of death's modern meanings."

Canadian culture has Protestant-derived origins: similar to the United States. However, Canada, and Toronto in particular (where this study was conducted), are now extremely diverse in terms of their inhabitant's cultural and religious backgrounds. At the very least, we should examine the cultural background of this study's participants to help us determine it's representativeness. In addition, the role that culture might play in any uncovered relationship between NDE information and NDE attitudes and/or death attitudes, should be investigated in future.

**Personality**

Pollak's (1979) review identified the fact that individuals with a greater sense of purpose in life report less death anxiety. Later studies confirmed that people who score higher on measures of self-actualization (the degree to which one's current self perception matches one's description of ideal self) and purpose in life, report lower death anxiety (Neimeyer and Van Brunt, 1995, p. 75; Stillion, p. 51 & 67) and death threat (Neimeyer and Chapman, 1980). As a near corollary to this study, Kastenbaum found that higher levels of death anxiety are reported by people who lack a sense of personal effectiveness, mastery, and power (1991, p. 20). Neimeyer and Van Brunt claim that the tendency of more self-actualized persons to express less, or comparatively low, fear of death and/or death threat "is one of the more extensively replicated findings in the literature" (p. 75).

In addition to lower death anxiety being found among those with less discrepancy between self and ideal-self (i.e., higher self-actualization), it has also been found among those with less discrepancy between present self and death (i.e., less "death threat") (Robinson and Wood, 1983). These are both central premises of Neimeyer's work using the threat index, which is described in some detail in the methods section of this paper.

Having a high internal locus of control (sense of control over one's life, environment etc.) has also been found to be associated with less death anxiety (Thorson and Powell, 1994, p. 33). However, these authors failed to offer a theory as to why this might be. Perhaps those who feel in control in life assume they will be "in control" in death as well?
Finally, with respect to the psychological makeup of the individual, there is some evidence that low scores on death anxiety measures may reflect a repressive or defensive personality style, rather than genuinely less death anxiety (Neimeyer, and Van Brunt, 1995, p. 77). The challenge to researchers, then, is to distinguish between repression and genuinely positive death attitudes.

Ideally self-actualization, death threat, locus of control, physical and mental health, and a defensive personality each ought to be addressed in terms of their possible role in any suggested association between NDE knowledge and NDE attitudes and/or death attitudes.

Life Experience/Situation

Although it is rarely measured or reported in death attitude research, the life experience and or current life situation of respondents may affect the death attitudes of individuals.

In analyzing Tolstoy's *The Death of Ivan Ilych*, Kastenbaum points out that our own attitudes toward life and death are challenged when a person close to us dies (1991, p. 17). There is some support for the notion that exposure to death speeds up understanding of the meaning of death in children (Stillion, 1985, p. 48). Although, the specific impact that this might have on future death attitudes of the individual remains unclear.

Past experience with death could influence the meaning that an individual, and/or a society, ascribes to death (Stillion, 1985, p. 64; Kalish, 1985; Kalish & Reynolds, 1976). In Kalish and Reynolds's (1976) study the most frequently selected influential factor in creating one's present death attitude was "the death of someone close"(26-41%), while the third most frequently selected influential factor was respondents believing they were close to their own death (19%). In an interesting study related to this later finding, Greyson reported reduced death threat in individuals claiming to have experienced death personally! [i.e., to have had a near-death experience (1992)]. Each of these events: the death of a loved one, one's own anticipated death, and NDEs may be thought of as potentially influential "life experiences" in terms of death attitudes.

Previous experience with death may include the bereavement associated with the loss of loved ones, along with any grief-associated rituals, beliefs, and teachings explicitly or implicitly passed on to us. Yet it might also include exposure to literature, art, and/or other forms of media which might have some influence on one's conception of death (Ezell, 1987, pp. 40-43.). For example, media, particularly television, has been criticized for presenting viewers with a distorted image of death; as being sudden, violent, and tragic (Simpson, 1979, p. 3).
One's life situation may also be significant. Fear of death among adults has been shown to vary with such factors as physical health status, and psychological health (with worse status correlating with more fear of death in both cases) (Wass, Christian, Myers, and Murphey, 1978-79; Templer, 1971; Wass and Sisler, 1979). It has also been noted that people experiencing mental or emotional problems tend to express higher levels of death anxiety (Kastenbaum, p. 20), such as those experiencing significant depression (Hintze, Templer, Cappelletty, and Frederick, 1994).

In terms of one's proximity to death, it is widely recognized that, in the words of Kearl, "society tends to depersonalize those most likely to expire" (1989, p. 120). Hinton (1968) found increased anxiety amongst dying patients in the last two weeks of life.

It is also possible for someone with a life-threatening illness to be classified as "denying" the likelihood of his or her death, without this actually being the case. The fact that "denial" may be overused in identifying death attitudes has been noted in the previous section. However, in addition, a person facing death may actually decide to suppress thoughts or discussion of death in an effort to make others comfortable enough to maintain a vitally needed relationship (Weisman, 1972).

Marshall has outlined how some elderly persons may be held to a desire to live by one last strand of engagement - the kinship strand (1974). Such persons might be expected to be more anxious and/or less accepting of their own deaths than those without such a last strand.

The results appear equivocal regarding the salience of factors such as personal exposure to death, and health status, in terms of their effects on death attitudes. Future research should explore such links to assist us in better ascribing causality to death attitudes.

Summary

In summarizing the variables affecting modern death attitudes, it appears as if the strongest predictors of individuals' death ideologies were found to be (1) religiosity (or "philosophical integrity"); (2) self-actualization; and (3) age. In addition, gender, life experience, and socio-economic status (sometimes indicated by level of education) might also cause variation in death attitudes, although the manifestation, not to mention the mechanism, of such change remains particularly unclear for these two variables.
It is important, at this juncture, to note Wong and colleagues’ reminder that, in their study (as in others), death acceptance is more salient than death anxiety. Indeed, as they state,

"scores for both fear of death and death avoidance tended to be around the midpoint of the 7-point scale, reflecting uncertainty. All scores for the three acceptance scales (escape, approach, and neutral acceptance) reflected high endorsement" (1984, p. 141).

As a further caveat to the above section, researchers warn that even the most salient factors that have been found to affect death attitudes may not be enough to account for the wide variety of meanings death holds for North Americans. As an example, Bengtson and colleagues found that the combined explanatory power of age, race, gender, and socio-economic status accounted for only about 5% of expressed fear of death (1977, p. 83).

It seems that, in order to more fully comprehend North American death attitudes, we must go beyond examining salient, associated factors. What we appear to need is a better understanding of how North Americans come to conceptualize death in the way that they do: in other words, we need to comprehend how death is socially constructed in North American culture.
THE SOCIAL CONSTRUCTION OF DEATH'S MEANINGS

The Social Construction of Meaning

Society's first function is the production of order and meaning (Kearl, 1989, p.23). Symbolic Interactionism is a theoretical perspective in sociology which assumes that society, social structures, and selves, and therefore reality as we perceive it, are socially created through continuous interaction over time (Charmaz, 1994, p. 29).

A symbolic interactionist perspective recognizes human beings "as meaning-craving animals: social creatures who subsist on symbols and labels to even understand themselves" (Kearl, 1989, p. 174). As Leming and Dickinson indicate, "it is through words (meanings or symbols) that one's perception is largely shaped" (1985, p. 41), and one's behaviour determined (1985, p. 30; Marshall, 1980, pp. 3 and 5).

Many scholars would argue that what death means to us - our conception of it - is socially constructed (Kearl, 1989, p. 22; Charmaz, 1980, p. 97; Marshall, 1980, pp. 3-5). What death means to us results from our socially shaped ideas and assumptions (Charmaz, 1994, p. 29). One's attitudes and behaviour in relation to death are largely learned via cultural interaction with public symbols, including the language, arts, and religious and funerary rituals of one's culture (Kearl, 1989, p. 22). Phrased another way, the particular meanings (e.g., of death) that one holds arise out of one's experience, experience which is grounded in interaction with other members and with the institutions of one's culture. Through experience, and through reflection upon that experience, interpretations may be changed or reaffirmed. Individuals may reinterpret previously accepted views and construct their own meanings (Marshall, 1980, p. 3; Charmaz, 1980, p. 18; Mellor, 1994, p. 11-17) while society provides a backdrop in which individuals do this interpreting and reinterpreting (Charmaz, 1980, p. 320).

The Personal Search for Meaning

Consistent with the sociological theory of Symbolic Interactionism are psychological theories which emphasize a personal search for meaning as a principal motivation innate to all human beings (Frankl, 1963; Thompson and Janigian, 1988; Kelly, 1955). According to such theories, we are motivated to seek an understanding, however subjective, of the purpose of our lives. Since mortality is an inevitable fact of life, we are (and always have been) similarly motivated to pursue the construction
of meaning for our deaths (Reker, Peacock, and Wong, 1987). Symbolic Interactionism emphasizes the fact that, as social creatures, the construction of such meaning occurs in a social context.

The specific, cognitive manner in which we consolidate our own personal meanings, or "constructs", of elements (things, persons, events etc.) has been suggested by Kelly in his Personal Construct Theory (1955). Kelly asserts that, in formulating constructs, individuals abstract some important way in which elements are similar and different. In this manner, people develop and continually revise a system of bipolar constructs (or dimensions) with which they organize and attribute meaning to death. According to this theory, human beings interpret elements, such as death, in order to be able to anticipate similar events in the future, perhaps in order to be better prepared for them. This may be why, as Frankl (1963) and others have argued, we are motivated to pursue meaning. [For a discussion of how personal constructs are formulated, see Torner, 1994, pp. 9-11; Neimeyer, 1994; or Kelly, 1955]

The theoretical perspectives of Symbolic Interactionism, Search for Meaning theories, and Personal Construct Theory may all be quite compatible then. Search for Meaning theories (Frankl, 1963; Thompson and Janigian, 1988) inform us that we are motivated to create meaning for elements. Personal Construct Theory (Kelly, 1955) suggests a means by which we might cognitively develop and consolidate such meanings, and Symbolic Interactionism reminds us that the ongoing search, development, and consolidation of these meanings is influenced by our social milieu.

Having established that the meaning of death is socially constructed, and perhaps having hinted as to why and how meanings of death are constructed, we now direct our attention to an overview of the way(s) death is conceptualized in the Western World.

Do We Deny Death?

Prior to the twentieth century, death anxiety centred not on whether immortality would follow death, but what form it would take (Kearl, p. 183). Today, in Kearl's opinion, this anxiety has transformed into the question of whether our fate after death is existential nothingness or some form of post-death existence (p. 184). Since science has yet to confirm the latter, the mainstream scientific position has been that death represents complete cessation of the individual physical being (Parsons, 1994). For a number of reasons (see below) such a perspective creates problems for a society that depends on continuity to maintain itself. Would it not be better, then, to deny death as much as possible?
A number of scholars have argued that, in the twentieth century Western world, death has become a taboo topic (Aries, 1981; Bertman, 1991, p. 3; Dumont and Foss, 1972, pp. 98-99; Ezell et al., 1987, p. 2; Kearl, 1989, p. 31; Rando, 1984, p. 5) perhaps because of the mystery of death and/or because of society's emphasis on youth (Ezell et al., 1987, p. 2). achievement, health, individualism, and personal control which may convince us that death represents failure (Durlak, 1994, p. 244). While some authors have claimed that death is denied in contemporary Western society (Charmaz, 1984, p. 5; Ezell et al., 1987; Fulton and Owen, 1994; Kearl, 1989, p. 212; Wass and Neimeyer, 1995, p. 18), others have simply suggested that it is feared, avoided, or hidden (Charmaz, 1980, p. 79; Mellor, 1994, p. 11). Others surmise that death is rejected (Kearl, 1995, p. 40), or merely that modern (North) Americans have increased difficulty in dealing with death compared to previous generations (Ezell et al., 1987; Feifel, 1971; Lifton, 1968).

Other researchers disagree with the notion that North Americans are an outright death denying, or even a death avoiding society (Clark, 1993, p. 3; Field, 1989, p. 6; Kalish and Reynolds, 1976, p. 27; Lofland, 1978, p. 37; Mellor, 1994; p. 41; Parsons and Lidz, 1967, p. 134; Riley, 1970). In general, such scholars argue that many individuals, including the elderly, are quite comfortable discussing death (Flint, Gayton, and Ozmon, 1983; Quinn and Reznikoff, 1985; Marshall, 1980) or that death acceptance is more salient than death anxiety (Wong et al., 1994, p. 141). These investigators also cite the burgeoning research into death and dying, along with the increasing occurrence of death issues in the media and popular literature, as evidence that North American society does not deny death (Feifel, 1990).

Despite their disapproval of the term denial, however, these scholars generally admit that our construction(s) of death have changed in recent decades. In part, it is recognized the average individual today faces death less than in previous centuries, for a number of reasons including the changed demography, timing, and circumstances of death in contemporary Western society (Charmaz, 1980, p. 90; Mellor, 1993; Clark, 1994). Scholars may not all concur that death is denied, rejected or otherwise taboo, but the thanatological literature all emphasizes one point: the meaning(s) of death has changed in recent decades.

"Death" has Changed

A number of scholars have attempted to identify the reasons how and why contemporary North American death attitudes have changed in recent decades. Lifton (1968) and others have identified several factors responsible for this change including: (1) urbanization and modernization,
whereby the cycle of birth and death has become unseen in our daily lives. Ezell and colleagues point out that we now set aside special places for death (funeral homes, cemeteries, hospitals), special times for remembering death (Remembrance Day, Good Friday etc.), and special symbols for death (flag flown at half mast etc.) (1987, p.2); (2) exclusion of the aged and dying due to institutionalization, specialization (Lifton, 1968), and bureaucratization (Lofland, 1978, pp.33-34), for example, in the proliferation of new death-related institutions and professions; (3) society's secularization from religion (Lifton, 1968), coupled with the secularization of death and dying (Lofland, 1978, p. 34) which may lead to threats of personal meaninglessness, and; (4) the threat of mass death from nuclear or other catastrophe (Lifton, 1968). To these factors one might also add: (5) increased life expectancy (due to health education, medical advances etc.) and a high incidence of mortality by chronic or degenerative disease, both of which Kearl feels has led to a change in the meaning of death in Western society to an event that "ought" to occur at the end of a long life (1989, p. 29); (6) the slow, lingering dying trajectories that early detection and medical innovations have brought (Lofland, 1978, p. 18), which have shifted fears of one's postmortem fate to fears of a slow, dying process (Kearl, 1989, p. 29) and/or a loss of self control (p. 34); (7) the creation of replaceable social roles, where one's death is made less significant by the fact that others can fill the departed's roles as citizen, worker, and even husband and father (Kearl, p. 46); (8) mass public education which, according to Fulton and Owen, has led to more liberal, secular, and humanistic values and beliefs ("relativistic secularism", p. 17) (1994b, p. 13), and; (9) the desensitizing effects of violence and death common in the mass media (Kearl, p. 400).

While a case has been made for recognizing that changes have occurred to our social construction of death, it is also important to clarify that death attitudes remain inextricably linked to life attitudes (Marshall, 1980, p. 164-68; Riley, 1970, pp. 30-41). As Cassell (1974) indicated, when describing modern North American attitudes toward death, "death (as with modern life) is a technical matter, a failure of technology in rescuing the body (pp. 31-32, cited in Marshall, 1980, p. 54; Glaser and Strauss, 1965). Morgan suggests that the medicalization of death has had the effect of our entire culture accepting (at least publicly) the medical profession's view of death: death as defeat (1995, p. 37). This may help to explain why many are uncomfortable openly discussing the issue of death. Such people attempt to escape discomfort by avoiding, as much as possible, discussion of the topic. Such avoidance is facilitated if death is hidden in a society.
Death is Hidden

Scholars seem to agree that, due to the changes outlined in the previous section, death remains largely hidden in modern Western society (Charmaz, 1980, p. 79; Mellor, 1994, p. 11). Some scholars believe that we fear death because we do not (often encounter and) understand it, and, thus, we fear the unknown (Ezell et. al., 1987, p. 4; Kavanaugh, 1974). Charmaz may concur, "experience with death is limited" (1980, p. 90). Indeed, Kastenbaum notes that, "we still tend to cover the topic (of death) with indirect, symbolic, and downright evasive language" (1991, p. 62). Death discussions have become bad taste; something to be avoided (Lerning and Dickenson, 1985, p. 3).

A.C. McGill has put forth the notion of the social "ethic of avoidance" whereby, he feels, (North) Americans are moved to resist all references to those things, such as death, which preclude the successful accomplishment of daily living (1987, pp.25-27). Aries hypothesizes that the cause of the current interdiction of death in our secular Western society is the need for happiness; "the moral duty and the social obligation to contribute to the collective happiness." Apparently, "by showing the least sign of sadness, one sins against happiness, threatens it, and society then risks losing its raison d'être" (1974, pp.93-94).

"Being forbidden, the inevitability of death became something to be hidden" (Kearl, 1989, p.47). The fact that we set aside special places for death such as the funeral home, cemeteries, hospitals, special times for remembering deaths such as Remembrance Day (Ezell, Anspaugh, and Oaks, 1987, p.2; Lofland, 1978, pp. 26,37), and special phrases like "at rest" and "pass on" to signify death (Rando, 1984, p.6) demonstrates a situation where the reality of "personal" deaths are quite far removed from our daily lives.

Philip Mellor claims that death is hidden because it "is a challenge to modernity" (1994, p. 11). Death can't be socially controlled so it threatens both the socially constructed picture of reality (p. 14), and our sense of order and continuity of self (p. 12). Mellor argues that one characteristic of post, or "high", modernity is that issues and practices which cause "problems of meaning", like death, are removed from public space. Such privatization forces the individual to deal with such issues and practices largely on his or her own, often without prescribed traditions, or courses of action, to follow (p. 12).

Another characteristic of post, or "high", modernity identified by Mellor is that meaning is "subjectivized"; it is, largely, left up to individuals to construct their own meaning for issues such as death. This subjectivization of death's meaning is part of a larger, contemporary process of "reflexivity" whereby all meanings, beliefs, and values are being examined and revised (deconstructed)
in light of changing circumstances (p. 17), including the emergence of "Relativistic Secularism" (Fulton and Owen, 1994b, p. 17). These factors are cited as leading to historically unique threats of personal meaninglessness in modern Western society (p. 12).

If it remains true that our current personal constructions of death inevitably lead to threats of personal meaninglessness, then our desire to avoid or to hide death is not surprising. But, are all issues concerning death always avoided or hidden in contemporary North American society? If not, might this indicate that some individuals actually elicit meaning from their constructions of death?

Death as a Purveyor of Meaning

While Mellor (1994) cites the fact that individuals now have more opportunity to develop their own constructs of death as being a harbinger to meaninglessness in our society, others would disagree. Many existentialists (Maslow, 1968, 1970; Frankl, 1963; Heidegger, 1962) and other theorists (Kelly, 1955) might argue that developing personal constructs or meanings for death represents a chance to acquire meaning concerning life (Tomer, 1992; Drapela, 1995). A review of the theories of these scholars supports this contention: Maslow's (1968, 1970) self-actualizing person has a greater acceptance of his or her life and a lower fear of death; in Frankl's (1963) perspective, the processes of reformulation of attitudes can help one to restore a sense of purpose in life; for Kelly (1955), death represents the clearest example of "threat" (the awareness of imminent change in one's core structures).

Such revision in one's core constructs implies radical changes in the person's outlook on life. Heidegger suggests that, although death represents the threat of nonexistence, a realization of our future nonexistence is a precondition to understanding our lives more fully and is necessary for freeing ourselves from anxiety (Tomer, 1992, p 477-482).

Some scholars, unlike Heidegger, do not presume that the conceptualization of death as nonexistence is the only one that is valid. Viewing death as an opportunity for "immortality" of one kind or another has also been recognized as giving meaning to life.

Lifton and Olson (1974) outline the death anxiety-reducing benefits of "symbolic immortality". Symbolic immortality refers to the belief that one may "live" on after one's death in a number of ways including: through one's work, creations, or thoughts; through one's biological offspring, and/or; though the memories of loved ones. Indeed, Westman and Canter (1985) found that defining death in terms of an "extended self" was found to be accompanied by less fear of death. One may make the argument that conceptions such as symbolic immortality and an extended self actually represent a
situation where an altered construction of "self" has been created.

While symbolic immortality may be an effective strategy for some, others may not find satisfaction in merely redefining the self to accommodate death. For many, coming to terms with their own mortality may require addressing the personal meaning that death, itself, holds. Those who fear death as an annihilation of the self (Hoelter, 1979; Florian and Kravetz, 1983), for example, would not likely be consoled by the concept of symbolic immortality. Conceiving of death as a continued existence in an afterlife has been shown to offer individuals meaning concerning death (Holcomb et al., 1993; Thorson and Powell, 1990) and life (Kalish, 1981, p.231; Steinitz, 1980). This effect may be especially pronounced for near-death experiencers (Flynn, 1982; Noyes, 1980; Ring, 1980, pp. 143-144; Sabom, 1982, p. 132).

There appears to be a close relationship between the constructs of life and death. It may be that the development of one conception affects the development of the other. Indeed, several studies support the existence of a positive correlation between purpose in life and positive death attitudes (Aronow, Rauchway, Peller, and DeVitto, 1980; Bolt, 1978). Flint, Gayton, and Ozmon (1983), and other researchers (Wong et al, 1994), have found a significant correlation between subjective satisfaction with one's past life (life review) and death acceptance in their elderly sample. Durlak (1972) reported that subjects who had meaning and purpose in their lives tended to have less fear of death and have more positive and accepting attitudes toward death. Quinn and Reznikoff (1985) discovered that subjects who lacked a sense of purpose and direction in their lives reported higher levels of death anxiety. Drolet (1990) reported a negative relationship between death anxiety and purpose in life.

Wong, Reker, and Gesser have emphasized the fact that the way people view death affects how they view life, and vice versa (1994, p. 128). Feisel has clarified that the meaning death holds for an individual can represent a key organizing principle in determining how he conducts himself in life (1959, p. 128). Epting and Neimeyer maintain that there are only two views of death: either it is the end of one's identity or it is a doorway to another life (1984). Steinitz (1980) found belief in an afterlife to be associated with optimism and meaningfulness. Kalish, however, reminds us that other individuals may find equal satisfaction from believing death leads to total extinction (1981, p. 231).

Regardless of whether one perceives death as nonexistence or as some form of immortality (symbolic or spiritual), the process of constructing death appears to represent an opportunity to find meaning for one's life, and vice versa. Furthermore, there appears to be an association between constructing death in a "positive" manner (acceptance as opposed to fear or avoidance) and viewing life in a positive manner.
The preceding two sections have outlined that, while many references to death are still hidden and/or avoided in contemporary North America, the conception of death continues to have an impact on our social construction of life.

The post modern situation in North America is one in which the socio-cultural (largely Judeo-Christian) influences of the past and the forces of modernization and secularization, have led to the twentieth century segregation of death and dying from the average person. At the same time, North Americans have freedom to construct, albeit through social processes, their own meanings for life and death: they may do so through the perspective of symbolic immortality, belief in an afterlife, or perhaps even through the “realization of our future nonexistence”. Given this current situation, however, several questions remain: what meaning will North American society now construct (or further develop) for death? Is a new meaning of death beginning to emerge in North America?

A New Meaning of Death?

Kastenbaum cites a 1981 U.S. President's commission report as indicating that Western conceptions of death may, in fact, be changing (1986, p.9-10). While this may be the case, Ezell and others have nevertheless characterized the general (North) American attitude toward death as remaining contradictory. This is, perhaps, not surprising. The tradition of hiding or otherwise avoiding death in our society has resulted in most people being somewhat uncomfortable with death issues. At the same time, however, many people have great interest in the subject of death (Ezell, Anspaugh, and Oaks, 1987, p.1), probably, in part, because they derive significant meaning from it.

The avoidance of death-related phenomena in North America seems to have been tempered by the recent proliferation of death-related literature. A strong interest in such activities has not been found in Western Europe. The possibility also exists that the beliefs of the strong U.S. Christian tradition have acted to abate the associated effects of the Western secularization of death in that society. Both of these factors may be helping to maintain a strong interest in death among North Americans.

Although Canada possesses cultural immigration patterns which differ somewhat from the U.S. (e.g., a higher percentage of non-Judeo-Christian immigrants), the significant cultural - especially media - ties to American culture support the likelihood that, on average, Canadians and Americans share very similar conceptions of death.
Since the mid-to-late nineteen seventies, various groups comprising a growing "death and dying movement", or "the happy death movement" as Lofland (1978) prefers to term it (1), have gradually been making their presence felt, particularly in North America.

In general, groups comprising this death and dying (or "happy death") movement "explicitly attempt to break down the silence and self-sufficiency that characterize dying" in the Western world today (Charmaz, 1980, p. 14). Such groups often advocate increased legal control for the dying over their own treatment (euthanasia etc.), and a rearrangement of the structure of care for the dying from hospitals to home and/or hospice care. Related groups promote death education and bereavement courses and workshops for all (Lofland, 1978, pp.78-86). As the number of individuals in such organizations appears to be increasing (p.77), their contribution to what may be a changing social perspective on death must be recognized. Social, psychological and other academic theorists (some of whom are members of these organizations) have also turned significant attention toward the subject of death in recent years with the formulation of a growing literature and the increasing incorporation of death-related material into courses at universities and colleges in North America (Cable, 1983, pp.4-5).

Stillion believes that the "death education movement" has been fostered, in part, as a result of the women's movement (circa 1970 and onwards) which encouraged the reexamination of the myths and stereotypes which both genders inherited (1985, p. 6). This movement also may have arisen as part of a larger, contemporary process of deconstruction in which all meanings, beliefs, and values are being examined and revised (Mellor, 1994, p. 17).

The growth of death-related literature, education and self-interest groups lends some support to Lofland's contention that (North) American society is undergoing a reconstruction in the way it relates to death and dying. According to Lofland, this reconstruction has been inspired by the new "face of (prolonged, bureaucratized, and secularized) death" modern Western society has been presented with (Lofland, 1978, p.35) and by the public articulation of concerns which members of the death and dying movement have. Lofland argues, recently begun to voice (p.37).

What, thus far, has been the outcome of this reconstruction of death? Wong and colleagues have outlined how contemporary North Americans can display a combination of attitudes including elements of avoidance, and several types of both fear and acceptance. All of these elements are thought to be related to the pursuit of personal meaning (1994, p. 135). Other researchers discuss varying levels of death threat (Neimeyer, 1994) or death competency (Robbins, 1994) that North Americans possess.

The research literature reveals that death acceptance is generally more salient than death anxiety and that scores for both fear and avoidance tend to be around the midpoint of the seven-point
Likert scale, which reflects uncertainty, while scores for acceptance tend to be high (1994, p. 141). Indeed, Cable insists that, while some fear of the process of dying seems to be significant universally, the fear of the actual state of death is far less pronounced (1983, p. 7).

Wong and colleagues explain that whether one fears or accepts death depends to a large extent on whether one has learned to accept one's life (1994, p. 123). This existential view is in line with Erikson's (1963) Integrity versus Despair crisis for individuals in their last stage of development. According to Erikson's theory, those who can achieve Integrity - the belief that their life has been worthwhile and meaningful - fear death less and accept death more than they would have otherwise. Other scholars, too, have argued that people are more afraid of a meaningless existence (Butler, 1963, 1975; Marshall, 1974), or of an incomplete life (Goodman, 1981) than they are of death. Proponents of this perspective suggest that individuals who see their lives as fulfilling and meaningful show less death anxiety and more death acceptance (Lewis and Butler, 1974). Studies have supported these author's contentions (Wong et al., 1994, p. 123).

Following Lofland's (1978) lead, Charmaz (1984) criticizes those who claim that a reconstruction of our North American views toward death has already occurred. Lofland (1978) and Charmaz (1984) grant that these authors are correct in their premises that numerous parties comprising a death and dying movement are gaining popularity. However, she argues that, for such reconstruction to truly occur, the institutions that deal with death, including hospitals, physicians, funeral homes and churches, must also show fundamental changes in social structure, which, for the most part, they have not (1984, p. 10-12).

Although reconstruction of a new meaning of death may be incomplete, this chapter has presented arguments supporting the notion that such a reconstruction is underway. The meaning(s) that North Americans construct for death are slowly changing due to transformations in North American society in general, and with death-related issues specifically.
Summary: Theoretical Perspective

This literature review served a dual purpose. It represented a forum in which to outline the theoretical perspective which has guided the development, implementation, and evaluation of this study and its findings. It also afforded the opportunity to define key concepts such as: NDE; NDEr; NDE knowledge; status passage; death; attitude; construct, and; the search for meaning.

The literature review began with a look at near-death experiences (NDEs): their definition, research history, general patterns, explanatory theories, aftereffects, and their role as a type of non-normative status passage. Following this, a section outlining research on the NDE knowledge and attitudes of various samples was presented. A segment dealing with the social construction of death's meanings was preceded by a section describing key correlates of North American death attitudes. A subsequent section presents research questions with theoretically derived hypotheses for each.

The theoretical position employed in this research thesis follows the existentially-derived perspective of Wong, Reker, and Gesser (1994) which posits that individuals are motivated to pursue personal meaning (Frankl, 1963; Reker, Peacock, and Wong, 1987). According to this perspective, fear of death, and other negative death attitudes such as escape acceptance, and death avoidance, (as well as death threat - Kelly, 1955; Neimeyer, 1995) may arise from the failure to find personal meaning for one's life and death (Wong et. al., 1994, p. 123).

The theoretical perspectives of Symbolic Interactionism, Search for Meaning theories, and Personal Construct Theory have all been put forth as being complementary, and as being helpful to the understanding of the personal pursuit of meaning. Search for meaning theories (Frankl, 1963; Thompson and Janigian, 1988) inform us that we are motivated to create meaning for elements such as death. Personal Construct Theory (Kelly, 1955) suggests a means by which we might cognitively develop and consolidate such meanings, and Symbolic Interactionism reminds us that the ongoing search, development, and consolidation of these meanings occurs in a social context.

The literature has emphasized that the pursuit of personal meaning regarding death is inextricably linked to the pursuit of life's meaning (Wong et al, 1994, p. 128). Regardless of whether one perceives death as nonexistence or as some form of immortality (symbolic or spiritual), the process of constructing death appears to represent an opportunity to find meaning for one's life, and vice versa. Furthermore, there appears to be an association between constructing death in a "positive" manner (acceptance as opposed to fear, threat, or avoidance) and viewing life in a positive manner (achieving fulfillment in and meaning for one's life) (Reker et al., 1987).
In attempting to comprehend the meaning of death in contemporary North America, we must bear in mind: (1) the cultural, largely religious, influences of the past; (2) the effects of the twentieth century segregation from death and dying; (3) the emergence of social movements attempting to influence our death attitudes and/or behaviour, and; (4) the continuing freedom for individuals to, through social processes, construct meaning for life and death. These processes have been delineated in this literature review and form a core of understanding upon which subsequent chapters are based.

NDEs

Studies show that most people in the western world have heard of NDEs and know a moderate amount about them. Generally positive attitudes are held regarding NDEs, particularly among those who believe in life after death, and those who claim to have had an NDE, or to know an NDER. Correlations between NDE knowledge and positive attitudes have been low to moderate, while correlations between either of these factors and life or death attitudes remain unexplored.

The elusiveness of an adequate explanatory model for NDEs, coupled with the evidence of their significant aftereffects, makes the public's perception of them even more intriguing. Given their uncertain causality, there appears to be considerable opportunity to develop a conception of these experiences which is consistent with one's own construction of death - almost regardless of the nature of that construction.

This research attempts to begin to answer the question of what impact, if any, NDE material may have on the development of personal constructs of death in a sample of North American adults. Will NDEs prove to be as salient a correlate of death attitudes as age, gender, or any of the others identified in this chapter? The answer has bearing on the way NDE material is perceived, and may be relevant to the continuing reconstruction of death in North American society.
Research Questions and Hypotheses

This study endeavours to investigate the following questions: What are the knowledge and attitudes concerning NDEs displayed by the sample? Are these persons' knowledge of NDEs related to their attitudes toward NDEs, and are these persons' knowledge of and attitudes toward NDEs related to their attitudes toward death? In order to address the above questions, six specific research questions have been formulated.

What follows is a presentation of each research question followed by a hypothesis as to the answer to each based on the theoretical perspective taken throughout this thesis and outlined in the previous section. In general, this perspective is based upon the premise that human beings are motivated to pursue meaning for their lives and deaths. To accomplish this, they develop and continually revise a system of bipolar constructs (or dimensions) with which they organize and attribute meaning to elements such as death.

The first part of the first research question is: **What is the level of NDE knowledge displayed by this sample of respondents?**

As with previous studies (see chapter 1 -section 2 of this thesis) a "moderate" amount of familiarity, or "knowledge", regarding NDEs is expected for this sample. It is hoped that, unlike many studies on NDE knowledge and attitudes, the data collection procedures employed here will ensure a high response rate from both those familiar and those unfamiliar with NDEs. If so, a somewhat less knowledgeable sample than found in other studies may be achieved since, it is assumed, familiarity with the topic may have led to a greater likelihood of completing and returning surveys in these studies. Counterbalancing this effect, perhaps, is the greater exposure of the average North American to NDE material, given the apparent increase in the popularity of NDEs in the media in recent years.

It is hypothesized that, if NDE accounts and other "information" assist an individual in finding meaning(s), or in supporting already established meaning(s) for his or her life or death (especially one's concept of life after death) he or she will be motivated to pursue knowledge about NDEs. Most persons who do not derive much meaning from NDE accounts will not be motivated to pursue NDE "information" and hence will know comparatively less than those who find NDEs meaningful with respect to their view of life, death and/or life after death. In addition, both those who believe they have had an NDE and those who know someone who believes s/he has had and NDE would be expected to have a greater knowledge concerning NDEs. This is hypothesized since both of these groups are more
likely to have had exposure to the profound meaning NDEs claim to derive from the experience (Noyes, 1980; Flynn, 1982; Greyson, 1983, Ring, 1984).

The second part of the first research questions is: (b) What demographic variables are significantly associated with NDE knowledge?

In terms of age, younger respondents are expected to know more about NDEs since they might have been more motivated to learn about NDEs, given that they often have had less exposure to formal religion than their older counterparts (Kearl, 1989, pp. 192-198). Formal religion may help some to formulate a meaning and purpose for life and death (Kalish, 1981, p.231). Without as much religious influence, younger people may be more receptive to NDE material as a potential source from which to derive meaning for life and death.

In terms of religion/spirituality, those who believe strongly in some form of personal self-aware existence after death, which often corresponds to those who are more religious or spiritual, are expected to have been motivated to learn more about NDEs. This is hypothesized especially if the NDE information they are exposed to is in line with their current beliefs concerning death.

Gender, level of education, and type of religion are not expected to be significantly related to NDE knowledge since previous research has indicated as much and since there is no theoretical reason why those in this sample who differ in these variables would have had dissimilar exposure to NDE material.

The first part of the second research question is: What are the NDE attitudes displayed by this sample of respondents?

As with previous studies (see page 15-37 of this thesis) generally positive attitudes toward NDEs are expected from this sample. Attitudes of belief, interest, and importance are all expected to be quite prevalent. Fear of NDEs is expected to be low to moderate, but present nonetheless, given the increasing frequency of negative NDE accounts presented in the popular literature and media, and given the likely unease of some with a topic related to death.

It is hypothesized that, if NDE accounts and other "information" assist an individual in finding meaning(s) or in supporting already established meaning(s) for one's life or death, he or she will have a positive attitude toward NDEs. Such people are expected to enter this study already possessing a belief in some form of personal self-aware existence after death, and to generally believe in the objective validity of NDEs as evidence supporting their beliefs. Most persons who do not derive much meaning from NDE accounts will not have a strongly positive (though likely also not a strongly
negative) attitude toward NDEs.

Both those who believe they have had an NDE and those who know someone who believes they have had an NDE would be expected to have a more positive attitude toward NDEs. This is hypothesized since both of these groups are more likely to have had exposure to the profound meaning NDErs claim to derive from the experience (Noyes, 1980; Flynn, 1982; Greyson, 1983, Ring, 1984).

It is hypothesized that the more positive a respondent’s attitude toward NDEs is, as indicated by the survey, the more that same respondent: (a) will have had a positive attitude toward NDEs the first time he/she heard about them (since NDEs immediately either fit into their meaning/conception of death, or they didn’t); (b) will have been positively affected by NDE material in a variety of ways; (c) will believe that NDEs may be helpful to some people, and; (d) will believe that health care workers should be prepared to discuss NDEs.

The second part of the second research questions is: (b) What demographic variables are significantly associated with a positive NDE attitude?

In terms of age, younger respondents might have a more positive attitude toward NDEs since they may have had more exposure to NDE material than their older counterparts and/or because, without as much religious influence (Kearl, 1989, pp. 192-198), younger people may be more receptive to NDE material as a potential source from which to derive meaning with respect to life and death.

In terms of religion/spirituality, those who believe strongly in some form of personal conscious existence after death (often corresponding to those who are more religious or spiritual) are expected to have a more positive attitude toward NDEs. This is hypothesized if the NDE information they are exposed to is in line with their current beliefs, especially with the meaning they ascribe to death.

Those respondents identifying an affiliation with a type of religion/spirituality which teaches a belief in some form of personal self-aware existence after death are expected to display more positive attitudes toward NDEs: especially more belief in their objective validity.

Gender and level of education are not expected to be significantly related to NDE attitudes since previous research has shown inconsistent findings and since there is no theoretical reason why individuals in this sample who differ in these variables would have dissimilar attitudes concerning NDEs.

The third research question is: What are (a) the life attitudes, and (b) the death attitudes displayed by this sample of respondents?

The life and death attitudes displayed by this sample are expected to be within the typical range
of attitudes for a diverse North American sample. A variety of life attitudes are anticipated indicating a wide range of perceived meaning and purpose for one's life. Death attitudes are also expected to be wide ranging, including varying levels of death threat, fear, avoidance, and acceptance. Both life attitudes and death attitudes are expected to be generally positive since it is assumed that most people will have already constructed some meaning for these concepts. There is evidence that individuals who have developed a personal philosophy of death view death more positively (Holcomb, Neimeyer, and Moore, 1993), and that death acceptance may be more salient than death anxiety (Wong et al., 1994, p. 141).

The fourth research question: **Is having more knowledge about NDEs associated with a more positive attitude toward NDEs?**

The hypothesis is that, if the NDE "knowledge" that an individual is exposed to is in line with his or her own established constructs (meanings) of death, more NDE knowledge will be associated with increasingly positive NDE attitudes. Since NDE material *is* expected to be in line with many respondents' established constructs of death, NDE knowledge and NDE attitudes are expected to show a moderate to strong association.

A much more difficult question to answer concerns the cause and effect relationship between NDE knowledge and NDE attitudes. Specifically, it is difficult to know whether acquiring more NDE information *causes* a more positive attitude toward NDEs, or whether already having a positive attitude (or at least an openness) toward NDEs *leads to* one being motivated to learn more about them.

The answer to this dilemma will not be definitively answered by this thesis. However, there is reason to favour the latter hypothesis, given that didactic methods such as the mere presentation of information has not been shown to significantly change death attitudes in for those in death education courses (Durlak, 1994, p. 249, 257).

The fifth research question is as follows: **Is having more knowledge about NDEs associated with a distinctive pattern of death attitudes (e.g., less fear of own death etc.) and life attitudes (e.g., a strong sense of meaning in life etc.) in this sample?**

It is hypothesized that, if acquiring NDE knowledge provides meaning or reinforces established constructs of death for an individual, then having more knowledge about NDEs *will* be associated with a positive pattern of death attitudes for this individual. Such a positive pattern of death attitudes is hypothesized to include: having less death threat, and fear, anger, avoidance, and depression
concerning one's own death; having a greater belief that a pleasant afterlife will follow death; displaying more acceptance of death, and; having a more positive life attitude profile, including possessing a stronger sense of current and future meaning and purpose in life.

The sixth research question is as follows: **Is having more positive attitude toward NDEs associated with a distinctive pattern of death attitudes (e.g., less fear of own death etc.) and life attitudes (e.g., a strong sense of meaning in life etc.) in this sample?**

The hypothesis is that those who believe that NDEs represent evidence for life after death, (who will likely also be those who are characterized as having a positive attitude toward NDEs) will display more positive death attitudes, including less death threat, less fear, avoidance, anger, and depression, and more acceptance of death and also more positive life attitudes, including more perceived meaning and purpose to their lives.

In summary, it is hypothesized that people either: (1) interpret NDE material (accounts, research etc.) in a way that confirms and strengthens their own current personal constructs (i.e., meanings) of life and death, or; (2) they dismiss NDE material as untrue and/or unimportant.

In death education research, actual changes in death attitudes have been reported with experiential programs but rarely, or not at all, with didactic methods such as the mere presentation of information (Durlak, 1994, p. 249, 257). In a similar manner, it is theorized that, although those who actually report NDEs maintain that the experience had been a profoundly meaningful and even life-changing event (Greyson, 1983; Moody, 1976; Noyes, 1980; Ring, 1980), individuals who merely hear or read about NDEs will not be so moved as to show change in their pre-existing constructs of life and death. It is hypothesized that, for non-NDEs, the meaning of life and death may (or may not) be strengthened by NDE material, but they are not changed significantly.

The next chapter outlines the methodology used in this study and includes sections on: concerns with previous research on NDE and death attitudes; instrument and survey question design; data collection procedures; the development of NDE knowledge, attitude and death attitude scales, and; methods of data analysis.
(1) Lofland identifies three central tenets of the happy death movement's ideological "craft of dying" as: immortality; positivity and; expressivity. In terms of immortality, the "fact" of a pleasant afterlife is based not on religion but on research into the experiences of those who have apparently died and "come back" (NDers), and on those who have witnessed the an especially blissful dying person (p. 93-5). The nature of the movements' emphasis on positivity is based on the belief that the dying process can be the occasion for self improvement and "growth" for the dying person, their friends and family, and that death itself may be blissful (p.96). This movement's espousal of "expressivity" involves the belief that "whatever the emotions engendered by dying and death, they should be expressed. To suppress expression is to sacrifice the opportunities for "growth" which death provides" (p.99).
METHODOLOGY

Assessing the Research on Death Attitudes and NDE Knowledge and Attitudes:
Some Concerns

The social sciences have, in recent decades, begun to pay more attention to the subject of death and dying, including research into death attitudes and NDEs. However, the relative recency with which these topics have been investigated in any formal sense has meant that a variety of concerns still abound in this field. Some understanding of the concerns involved in assessing death attitudes, and NDE knowledge and attitudes is necessary here. It will help us to bring research findings identified in the literature review into proper light, and to set the stage for the justification of the methodological tools used in the present study.

In terms of assessing death attitudes and NDE knowledge and attitudes, concerns pertain to the paucity, in the literature, of: (1) concept clarification; (2) theoretically grounded research with testable hypothesis; (3) measures which recognize the multidimensional nature of death attitudes and NDE attitudes; (4) attention to the temporal dimension of (death and NDE) attitudes; (5) adequate samples and response rates from which to make generalizations, and; (6) confidence regarding the external validity of the methodological tools used. A further concern is (7) the theoretical leanings or biases of researchers.

1) Concept Clarification

One problem in attempting to analyze previous studies on death attitudes is their lack of consensus regarding just what is being measured. Studies have differed as to whether they are examining death as a state or as a process, and also whether they are attempting to assess the death of oneself, the death of others (grief), or both (Tomer, 1992, p. 497-8).

For the purposes of this investigation, it is necessary to more narrowly define several central concepts. First, the term death is taken to mean the biological state of death, rather than the process of dying. Second, attitudes toward life and death refer to one's attitudes toward one's own life and death, as opposed to that of a loved one, or such attitudes in general. Third, the life and death attitudes discussed in this paper are taken to mean those experienced in 'day-to-day life', rather than those occurring after some traumatic or otherwise personal experience.
Often, researchers have failed to identify which aspect of 'death attitudes' they are measuring, or to even acknowledge that 'death attitudes' may be construed, defined and measured in numerous ways, for example, some studies measure death attitudes implicitly (through analysis of subconscious thoughts etc.) while others measure them explicitly (via survey or interview etc.).

Most studies of death anxiety and other death attitudes have used self-report questionnaires (Kastenbaum, 1991, p. 18). While some, including many in the psychoanalytic tradition, may argue that such self-reported measures fail to uncover the real subconscious death attitudes of individuals, the continued widespread use of self reports implies that the vast majority of sociological and psychological researchers feel they are valid instruments for examining death attitudes. The decision by psychologists and sociologists not to use psychoanalytic measures likely derives from a rejection of psychoanalytic theory and/or a view that these methods are no better at predicting an individuals' death attitudes nor behaviour. However, it is also likely that the preference of these researchers to use self-report questionnaires reflects both their comfort in using them, and the ease with which a larger sample of responses may be acquired.

It is important to be clear that, in keeping with most work on the subject, this study will ascertain the explicit expression of attitudes toward NDEs, and toward death, as measured by self report questionnaires. Inherent in this choice of methodology is the theoretical position that psychoanalytic analysis or other implicit means of assessing attitudes are not required.

Operational concepts need to be clearly defined if meaningful information is to be extracted from studies, comparisons made between studies, and comparisons made between the various measures used in such studies. Indeed, several studies on NDE knowledge and attitudes (Walker & Russell, 1989, Bechtel et al., 1992) identify possible confusion over the meaning of 'NDE' as a confounding factor in the analysis of research data.

This study has attempted to address these concerns by clarifying, from the outset, key concepts such as: death, Near-Death Experience, death attitudes, etc.

2) Theoretically Grounded Research

Neimeyer argues for the need to conduct theoretically grounded research; and for the need to outline the assumptions of such theories to formulate testable hypotheses (1994, p.263-4). According to Tomer, ideally, "the type of measure(s) used depends on the theoretical perspective(s), remembering that there is a lot of overlap among theories (1992, p.496).

These authors espouse using theoretical knowledge to formulate testable hypotheses about
death attitudes and related phenomena. This use of theory as a basis for research seems equally valid for measuring NDE knowledge and attitudes. These hypotheses would then be tested "to support or disconfirm key tenets of the theories" rather than the retrospective fitting of theory to account for research findings, in a post hoc manner. The lack of death attitude research adhering to this criterion is underscored by these authors (Neimeyer, 1994, p. 263-4; Tomer, 1992, p. 498), and is also evident in examining studies of NDE knowledge and attitudes. In fact, no theory regarding NDE knowledge or attitudes could be found in the literature.

The dilemma with death attitude studies which have been theoretically grounded is that existing theories offered to account for death attitudes often explain some but not all of the research findings. According to both Neimeyer (1994) and Tomer (1992, pp. 498-99), what is needed is an attempt to integrate existing theories to form a more complete theory of death attitudes.

These concerns have also been addressed in the present study. The planning, implementation, and analysis of this research has been guided by two well established, and potentially integrative, theoretical perspectives: "search for meaning theory" (Frankl, 1965; Thompson and Janigian, 1988) and personal construct theory (Kelly, 1955; Neimeyer, 1994). These theories have both been identified in recent scholarship as promising theoretical models for the study of death attitudes (Wong et al., 1994, p. 121; Neimeyer, 1994). The methodological tools used in this study involved instruments reflecting both of these theoretical perspectives, and testable hypotheses regarding NDE knowledge and attitudes and death attitudes have been formulated based on these perspectives. These hypotheses are presented at the end of the literature review in a section entitled "Research questions and hypotheses."

Finally, as Neimeyer (1994) and Tomer (1992) have recommended, an attempt is made, in the Discussion section of this thesis, to integrate the two theories on death attitudes into a somewhat more comprehensive model which might offer a productive explanation of the research findings of this study.

3) The multidimensional nature of death attitudes

The multidimensional nature of death attitudes in general, and of components of death attitudes (such as fear of death) is now widely accepted among scholars (Durlak & Kass, 1981; Hammer & Brookings, 1987; Littlefield & Fleming, 1984-85; Marshall, 1980, p. 70; Neimeyer, 1994, p. 266; Nelson, 1978). Therefore, the use of unidimensional scales designed to assess concepts such as 'death anxiety', such as Templer's Death Anxiety Scale, or Collett and Lester's Fear of Death Scale should be seen as inadequate for assessing death attitudes. This also means that much of the previous research,
more than half of which used either of these popular scales (Neimeyer and Van Brunt, 1995, p. 59). needs to be reexamined with a critical eye.

The present study was developed around the premise that death attitudes are, indeed, multidimensional. This is evident in its use of questions from Wong and colleagues' findings on the multidimensional nature of death attitudes, and also its use of a variety of differing 'fear of death' questions, adapted from previous studies. Both of the guiding theoretical perspectives allow for multidimensionality of death attitudes.

With respect to NDE attitudes, chapter two of this thesis outlines the fact that studies soliciting open-ended responses to NDEs show several different NDE attitudes exist. Through a review of the literature, the author has identified four distinct dimensions along which NDE attitudes seem to cluster: Belief; Interest; Importance, and; Fear. While the dimensionality of NDE attitudes has yet to be firmly established, ideally, an NDE survey should address all four of these dimensions in some manner. This study included five questions from each of these 'dimensions' in it's NDE attitude scale.

4) The temporal dimension of death attitudes

In the vast majority of studies to date, both death attitudes and NDE attitudes have generally been assumed to be 'traits' and thus to be relatively stable, as opposed to being 'states' and thus to be variable over time. This is assumed from the fact that an overwhelming majority of these studies have been cross-sectional, and that very few, if any, have been longitudinal.

While Pettigrew and Dawson's (1979) work suggests that death anxiety, for example, is mainly a trait, Tomer has pointed out that "many variables have both a trait-like and a state-like character" (1992, p. 497-8). Ideally, theories attempting to account for death attitudes and NDE attitudes, or influencing factors on these attitudes, would give some account of their temporal nature.

The state versus trait debate will not be answered by the findings of this thesis. However, unlike many previous studies, the possible state-like nature of death attitudes and/or NDE attitudes is at least recognized in this study. The cautionary notices in the results and discussion sections, warning against interpreting factors as causing death attitudes etc., are a necessary way of recognizing that NDE, death (and other) attitudes may have a temporal dimension which requires longitudinal methods to fully describe.
5) Adequate Samples

Inadequate samples used in many previous studies also make interpretation of findings difficult. Samples may be inadequate in terms of low sample sizes, poor response rates, and restricted age and socio-cultural ranges of participants. As an example, using NDE attitude research, Kellehear's response rates were never measured it seems, and those of the Thornburg-type studies on NDEs have generally been disappointing, ranging from 11% to 70%, with an average response rate of about 40%. Sample sizes in some NDE knowledge studies have been less than 60 respondents and target groups have thus far been limited to health care workers.

The present study attempted to prevent sample inadequacies in a number of ways, including its method of data collection. As will be described in detail in the Methods section, data collection was conducted in a manner which, it was felt, would ensure a healthy response rate from a diverse group which was adequately sized for statistical analysis etc.

6) External validity

In terms of assessing death attitudes, concerns pertain to the lack of confidence regarding the external validity of the methodological tools used in most studies. Critics admit that it remains "difficult to establish the external validity of death anxiety scales" (by far, the most common type of previously used 'death attitude' analysis, Kastenbaum, 1991, p.18-19). However, the tools chosen to assess death attitudes in this study have been shown to be externally valid on several occasions (see Instrument & survey design chapter in Methods section).

With respect to NDE knowledge, one measure of external validity might be to examine the knowledge scores of actual NDErs and those who personally know an NDEr to see if they score higher than the average respondent. Higher scores would be expected since both of these groups should have more personal knowledge about NDEs or have been more motivated to learn about them.

Critics have pointed out that there has been no strong link established between attitude and behaviour. Therefore, while individuals may differ in their responses on an NDE or death attitude questionnaire, this does not prove that they would behave differently in any given situation (Kastenbaum, 1991, p.19).
7) Researcher Bias

As a final thought on the subject, it is also possible that the perspective of the scholar, theoretical or otherwise, may influence the analysis and summary of NDE and/or death attitudes.

Kastenbaum has pointed out that the "death awareness movement" (discussed elsewhere in this paper, but generally referring to those advocating hospices, the right-to-die, and/or widespread death education) assumes that: (1) death makes us all feel anxious, and that: (2) most of us are too anxious. While such a perspective may, in fact, be erroneous - in that most people score in the low to moderate range on self reported death anxiety measures - it is easy to imagine how such a perspective could interfere with the unbiased reporting of death attitudes in our society.

Marshall has noted that most research on attitudes toward death and dying assumes that death is inherently fearful (1980, p. 64). To the extent that recent researchers have not heeded Marshall's caution, a researchers' theoretical perspective may continue to skew research design, coding, and/or analysis to the detriment of valid conclusions on the subject. As an example, researchers have previously erroneously attributed particular death attitudes, such as low scores on death anxiety measures, as reflecting high denial of death (Kastenbaum, p. 19).

With regard to NDE attitudes, most researchers appear to view near-death experiences in a positive light. If true, these researchers might downplay negative NDE attitudes expressed by respondents in favour of more positive attitudes. An extension of the above point is evident in the call, by several studies, for widespread education about NDEs for all health care workers. Such a directive may be premature in that it is still not known whether any patients would need or want to discuss NDEs with them.

Summary of Concerns

In sum, individuals investigating NDE knowledge and attitudes are still in the process of developing adequate research methods, while those investigating death attitudes are busy confirming the utility of newly established measures. The achievement of both of these goals requires the following: (1) Testing theoretically derived hypotheses by using valid measures - measures which have clearly defined terms such as 'NDE', 'death' (as a state or a trait), and 'death attitudes' (as being temporal or static, and of their expression as being explicit or implicit); (2) Ensuring large enough and diverse enough sample sizes with adequate response rates so that findings may be generalized to wider populations, and; (3) Offering as unbiased an analysis as possible when linking findings to established
theory. In addition, longitudinal study into the temporality of death attitudes and NDE attitudes is desirable, if not always practical, for future studies.

The author has attempted to address as many of the above concerns as was practical when designing and conducting the present study. Undoubtedly, this study too, like others in this relatively young field, will have limitations that will need to be taken into consideration when interpreting its results. Indeed, limitations to the findings of this study are addressed in a concluding section of this thesis.

Instrument Development & Survey Question Design

In order to answer the research questions outlined in the concluding section of the literature review, a survey was designed. It was determined that the following variables required the utilization of scales for their assessment: NDE knowledge; NDE attitudes and death attitudes. It was also determined that it would be informative to collect data on the life attitudes of respondents, specifically concerning the meaning and purpose they ascribe to their lives. This was done in order to better understand the possible means by which NDE information might affect life and/or death attitudes.

The development, implementation and analysis of the aforementioned scales and, indeed, all questions for this survey, have been guided by the attempt to alleviate as many as possible of the NDE and death attitude research concerns outlined in the previous section.

Measuring NDE Knowledge

To determine respondents' knowledge of existing information about NDEs, a scale was created based on Nina Thornburg's (1988) Near-Death Phenomena Questionnaire. Thornburg's questionnaire was deemed to need revision for this study for the following reasons: (1) to include a wider variety of content areas on the topic of Near-Death Experiences (e.g., more of the commonly reported 'events' of NDEs, common after effects not included by Thornburg etc.); (2) to offer a better balance between the number of questions in different content areas (i.e., emphasizing commonly reported events/components of NDEs more than the causes or after effects of NDEs); (3) to attempt to improve the overall evaluative quality of the questions [i.e. those 12 questions which were adapted from Thornburg's questionnaire were those which correlated most highly with her overall knowledge scale]; (4) to eliminate wording which may serve to legitimate NDEs and possibly influence later NDE attitude
responses (i.e. terms such as NDE "survivors" imply that an objective experience had indeed occurred - such terms were omitted here); (5) to clarify certain technical terminology (since Thornburg's questionnaire was designed for nurses); and (6) to ensure that all items used in the final scale meet item analysis requirements for scale construction (Thornburg gives no mention of item analysis regarding her scale's construction).

As with Thornburg's study, conducted in 1983, the literature was reviewed in order to create items for the present NDE knowledge scale. Twelve (12) questions were modified from Thornburg's original Near-Death Phenomena knowledge scale. Other questions were developed to appropriately balance the various content areas of NDE knowledge, including questions regarding causes, aftereffects, elements of NDEs, and unpleasant experiences. A small group of individuals (n=10) reviewed the items to ensure their clarity. Three experts in the area of NDE research were contacted in writing and asked to review the instrument to ensure the content validity of the scale's items. Each of the reviewers (Bruce Greyson, M.D., Nancy Evans-Bush, M.A., and Yvonne Kason, M.D.) hold postgraduate degrees and were well published in the NDE literature. Based on feedback from these scholars, items considered inappropriate or ambiguous were reworded or excluded from the scale.

The twenty six (26) items thus developed were presented in the survey under the following section subheadings for greater clarity: Causes & Correlates (5 items: #41-46 in this survey); Aftereffects (6 items: #46-51); Elements of NDEs (10 items: #52-61) and; Unpleasant NDEs (5 items: #62-66).

As with Thornburg's questionnaire, questions were posed in a true / false / I don't know format. The scoring system for the NDE knowledge scale was as follows: correct answers were assigned a value of one, and incorrect as well as "I don't know" responses were assigned a value of zero. No marks were subtracted for incorrect answers.

In addition to the NDE knowledge scale developed, other relevant questions were added to the survey. An open-ended NDE knowledge question (#40) was included, as was a question (#34) inquiring whether participants had heard of NDEs before, and a question (#35) asking from which possible sources participants had received NDE information. Participants were further asked (question #39) to estimate the proportion of adults in North America who believe they've had an NDE, whether they, themselves, believed they had had one (#91), and also if they knew anyone who believed they had had an NDE (#92).
Measuring NDE Attitudes

Another instrument was created for the purpose of determining respondents' attitudes toward NDEs. Although Thornburg had created an 'Attitude Toward Near-Death Phenomena scale (1988), this was deemed inappropriate for the present study as several questions on Thornburg’s attitude scale appear, instead, to assess NDE knowledge. In addition, a significant number of Thornburg’s questions address attitudes relevant specifically to nurses (e.g., attitudes related to clinical care) rather than those relevant to the general public.

Following procedures to develop a valid attitude scale (Abdel-Gaid, Trueblood, & Shrigley, 1986) an extensive literature review was conducted to collect and assess existing information regarding attitudes toward NDEs. Open-ended responses from previous studies assessing NDE attitudes of health care professionals indicated that NDE attitudes appeared to be effectively characterized along five distinct continua: Interest; Importance; Belief; Fear and; Encouragement (Thornburg, 1988; Bechtel et al., 1992; Walker & Russell, 1989; Royse, 1985; Hayes & Waters, 1989; Hayes & Orme, 1990; Oakes, 1981). Accordingly, 20 five-point Likert statements (1/2 worded positively and 1/2 worded negatively) representing each distinct aspect of NDE attitude (as uncovered in the literature) were created. These statements were checked to ensure they surpassed Edwards' Criteria for grammatical clarity/acceptability (A. Edwards, 1957, pp.1-17) and included in the study's survey (questions #70-89).

As with the NDE knowledge scale, the same three experts in the area of NDE research were used to establish the content validity of the NDE attitude scale items. Items considered by these individuals as inappropriate or ambiguous were reworded or excluded from the scale.

The NDE attitude scale and individual questions related to NDE attitude were situated in the survey such that they followed a brief vignette of a "typical", yet detailed, hypothetical NDE report (please see appendix C, page 13 of survey). This vignette was included so that all participants would have, at least in general, a common conception of what a NDE report (albeit, an elaborate one) would read like.

For scoring purposes, "strongly agree" received a score of five for positively worded statements (as did #83 and 89 - since agreement on these questions indicated a "positive" attitude toward NDEs). Strongly disagree" received a score of five for negatively worded statements (as did #75 - since agreement on this question indicated a "positive" attitude toward NDEs).

In addition to the NDE attitude scale developed, other pertinent questions were included in the survey. Immediately proceeding the NDE vignette, respondents were asked whether this or any other
NDE information had "affected" them in any way (survey question #68). Those answering in the affirmative were invited (in question #69) to include open-ended responses delineating in what way they had been "affected".

All participants were also asked to answer 16 Likert scale questions (survey question #37 a-q) which assessed the degree to which what they knew about NDEs affected them in specific ways (e.g., reduced fear of death etc.). These 'specific ways' were selected based on published research findings of the effects of NDEs on individuals who reported experiencing an NDE.

Other inquiries pertaining to NDE attitudes included several questions soliciting the degree of knowledge regarding NDEs that respondents felt is necessary for various health care workers to have (survey question #94 a-e), and also questions designed to assess for who, if anyone, and to what extent, if any, respondents felt information regarding NDEs would be useful (#96-99).

Finally, a key question (#90) asked respondents to place a check mark beside the one explanation (from a list of 9 options) that they felt best explained the NDE vignette which they had just read. This method has been used by Kellehear and Heaven to assess Australian (1989) and Chinese (1990, with Gao) attitudes toward NDEs.

Measuring Attitudes Toward Death

For the purposes of determining respondents' attitudes toward death, two distinct approaches were used. The first approach was guided by the search for meaning theory previously outlined (Frankl, 1965; Reker, Peacock, and Wong, 1987) and involved posing a series of five-point Likert scale questions aimed at directly assessing each respondent's attitudes toward his/her own death. The second approach was guided by personal construct theory, also previously outlined (Kelly, 1955; Neimeyer, 1980, 1995), and involved use of the Threat Index, an indirect method of assessing the degree of threat one's hypothetically imminent death poses to oneself.

With respect to the direct, five-point Likert scale questions, these were drawn from several sources: (1) Wong, Reker, and Gesser's Death Attitudes Profile-Revised (Neimeyer, 1994, pp.121-148) and; (2) Florian and Kravetz' (1983) work on the "Fear of Personal Death", in addition to Hoelter's (1979) Multidimensional Fear of Death Scale which both focussed on the specific factors comprising fear of personal death. These three sources were singled out as being the most appropriate (direct method - forced choice) instruments, and have received similar support in the literature (Neimeyer and Moore, 1994, p. 103-104; Wong, Reker, and Gesser, 1994).

Wong, Reker, and Gesser's DAP-R represents a more multidimensional evaluation of death
attitudes than is provided by most previous death attitude studies, which have always tended to be fixed on death fear (Marshall, 1982, p.303). A search of the contemporary literature revealed that instruments which recognize the multidimensional nature of death attitudes are still quite lacking (Neimeyer, 1994, p.266-269).

Taking up the challenge of creating a multidimensional scale of death attitudes, the DAP-R goes beyond assessing the individuals' fear of own death, to include various forms of death acceptance and also assesses an individuals' desire to avoid the topic altogether. Wong, Reker, and Gesser's position, in looking for the multiple dimensions of death attitudes "is derived from an existential perspective, which posits that individuals are motivated to pursue personal meaning" and that "fear of death" and death avoidance may stem "from the failure to find personal meaning for one's life and death" (Wong, Reker, and Gesser, 1994, p. 123).

In their study, 300 individuals of varying ages completed the DAP-R (a revision of the DAP published in 1987-88). Participants also completed other, widely used measures of death anxiety (Templer, 1970), and death perspective (Hooper & Spilka, 1970).

After factor analysis of the DAP-R items, five dimensions of attitude toward own's own death were identified by Wong et al.: (1) Approach Acceptance ("the view of death as a gateway to a happy afterlife"); (2) Escape Acceptance ("the view of death as escape from a painful existence"); (3) Neutral Acceptance ("the view of death as a reality that is neither to be feared nor welcomed"); (4) Fear of death ("negative thoughts and feelings about the state of death") and; (5) Death Avoidance (a defense mechanism in which one avoids "thinking or talking about death in order to reduce death anxiety") (Neimeyer, 1994, pp 122-128).

The internal consistency of these five factors was found to be high, as shown by Cronbach Alpha reliability coefficients of .86, .88, .65, .97, and .84 respectively. Four-week test-retest correlations for 30 respondents were all above .61, which is generally acceptable.

Convergent-discriminative validity of the DAP-R was found to be high, as "predicted correlations" between each of the five DAP-R factors and the other death attitude scales "were confirmed" (p. 27). This may also indicate some degree of external validity to the DAP-R.

For the purposes of the present study, it was felt that inclusion of the entire 32 item DAP-R would be excessive, given the already lengthy nature of the survey. Therefore, five questions derived from the DAP-R were included (see survey questions #7-10 and #13). Each of these questions was chosen as being representative of one of the five dimensions of the DAP-R, based on the definition of the dimensions (factors) given by these authors. For two of the questions (#8 and #10) the original DAP-R wording has been used, while for each of the three other questions (#7, 9, and 13) one or
several words has been modified in order to better capture the general meaning of each of the dimensions, as described by Wong, Reker, and Gesser themselves.

Two additional questions regarding general death attitudes were included. One question (#12) asked whether respondents felt the topic of their death was depressing, and the other (#11) inquired as to whether they were angry over the fact that they would have to die "some day" (anger over own mortality). These questions were developed and included based on feedback from individuals who read the rough draft of this survey.

Fear of death

Florian and Shlomo's (1983) research may be the most comprehensive study published on the topic of the individual's fear of own death, in terms of the wide variety of factors/dimensions identified. The study involved 178 young adult males, aged 18 to 30. Past empirical and theoretical research, as well as the qualitative responses of a group of 50 social science students asked to list reasons for their fear of death, guided the formulation of an initial pool of 50 items.

While many researchers have proposed one, or perhaps two or three dimensions for fear of own death (e.g., Templer, 1970, Collet and Lester, 1974, Thorson and Powell, 1984), factor analysis of Florian and Shlomo's data revealed six generally distinct dimensions of the fear of own death. They are as follows: (the fear of) (1) the loss of self-fulfilment; (2) the loss of social identity; (3) the consequences to family and friends; (4) transcendental consequences; (5) self annihilation (6) punishment in the hereafter.

Several years prior to the research done by Florian and Shlomo, Hoelter (1979) surveyed 365 undergraduate students and then published a 42-item scale designed to measure the fear of death. Hoelter's eight-factor multidimensional scale was developed on empirical grounds and, like Florian and Shlomo, he provided evidence for the coherence and interpretability of the scale using factor-analytic procedures. Hoelter's eight factors included: (1) Fear of the dying process; (2) Fear of the dead [Note that these first two of Hoelter's factors fall outside of the focus of this thesis: Namely, measuring attitudes toward the state of one's own death, not one's own dying nor another's death]; (3) Fear of being destroyed; (4) Fear for significant others; (5) Fear of the unknown; (6) Fear of conscious death; (7) Fear for body after death, and; (8) Fear of premature death.

For the purposes of the present study, it was felt that inclusion of either Hoelter's entire 42-item MFOD scale or Florian and Shlomo's entire 31-item 'Fear of Personal Death' scale would be excessive, given the already lengthy nature of the survey. Therefore, questions were included which were deemed
to be representative of each dimension of the fear of own death which emerged from these studies, bearing in mind the overlap of several dimensions independently uncovered by these researchers. In all, 12 questions were included to assess respondents' fear of their own death. These questions correspond to survey questions number 14 through 25.

The Threat Index

The second approach used in determining respondents' attitudes toward death involved the Threat Index. This instrument, which has been shown to (indirectly) assess the threat that one's own death represents to oneself, was first developed by Krieger, Epting, and Leitner (1974). The Threat Index is based on Kelly's (1955) psychology of personal constructs, which posits that each individual is motivated to pursue and develop a system of bipolar constructs (or dimensions) to organize and attribute meaning to the world. Krieger and colleagues (1974) propose that the degree of threat presented by death is proportional to the disparity between the individuals' constructions of self and death (Greyson, 1992, p. 526). Individuals who describe both themselves and their (hypothetically) imminent deaths similarly on many of their bipolar personal constructs would, according to this theory, regard death as less of a change from their current status and therefore as less threatening.

In a confirmatory factor analytic study of the standard 40-item Threat Index, developed by Krieger et al. (1974), Moore and Neimeyer (1991) used advanced computer statistical methods to analyze data from their two large subsamples of U.S. university students (n = 405 per sample). A 25 item scale was developed by these authors after in-depth factor analysis, using the LISREL VI program, uncovered one global factor and 3 subfactors. The Cronbach Alpha reliability coefficient for their global factor was high (.88). Subfactors and corresponding Alpha reliability coefficients included: Threat to well-being (.80); Uncertainty (.77) and; Fatalism (.83). Four week test-retest reliability was also quite good as well, with Pearson correlations of r = .64 for the Global threat factor, and similar values for the three subfactors.

The finding of Moore and Neimeyer represents the first occasion when any factor analysis of the Threat Index has clearly produced more than one factor (although the 3 subfactors were actually closely related to the global factor). The key rationale for employing Moore and Neimeyer's abbreviated version of the Threat Index is the fact that this version best complies with the demand of most scholars (Marshall, 1980; Durlak and Kass, 1981; Wong, Reker, and Gesser, 1994; Neimeyer, 1994, pp. 266-69) that any measures of death fear, anxiety (or threat) be multidimensional in nature, in keeping with the findings of most studies regarding death fear or anxiety. The 25-item version of the
Threat Index developed by Moore and Neimeyer (1991) corresponds to survey questions 31 and 32 of the survey (see appendix C).

The Threat Index has repeatedly achieved high levels of validity and reliability (Thorson and Powell, 1994, p. 32; Neimeyer, 1994), and is highly regarded in the death attitude literature as an excellent tool which has the benefit of being derived from a well-defined theoretical perspective (Neimeyer, 1994; Pritchard and Epting, 1992). In further support of the value of the Threat Index, it has been shown that this measure properly differentiated between known groups which ought to differ in their level of fear of death, such as death education students versus controls (Epting and Neimeyer, 1984; Moore and Neimeyer, 1991).

Life Attitudes

At the bottom section of page three of the survey (see appendix C), five questions (questions #26-30) concerning life attitudes are presented. These questions are considered representative of the principal dimensions identified in Reker and Peacock's (1981) Life Attitude Profile (LAP). As with the DAP-R, their wording has been developed such that they capture the general essence of what each factor represents, according to the authors' description of each factor (pp. 266-67).

Consistent with Victor Frankl's (1963) theory of logotherapy, the LAP was constructed to assess an individual's degree of existential meaning and purpose in life and the motivation to find meaning and purpose (Reker and Peacock, 1981, p.272).

Reker and Peacock (1981) surveyed 219 undergraduate university students, regarding their views toward life, using a collection of items from various existing life attitude scales, and additional original items as well. Factor analysis of Reker and Peacock's sample revealed seven factors for the LAP. These factors displayed Cronbach Alpha reliability coefficients which ranged from marginally adequate (.55) to strong (.83).

Representative questions from five of Peacock's seven factors have been included because individuals who claim to have had a near-death experience almost all claim to have gained a profound, new sense of meaning and purpose in their lives (Noyes, 1980; Flynn, 1982; Greyson, 1983, Ring, 1984). It would be interesting to note whether, for the sample participating in the present study, there is any association between one's level of knowledge or attitude concerning NDEs, and one's sense of meaning and purpose in life, since this may inform us further about the affect of NDEs on their death attitudes and construction of death.

Demographic questions, suggested by the literature to be relevant to NDE knowledge or attitudes, or to death attitudes, were also included in the survey.
Data Collection

Permission was obtained from the Review Committee on the Use of Human Subjects through the Office of Research Services at The University of Toronto to survey the selected sample population.

The target population was adults in the greater Toronto area. A method of convenience was used, whereby associates of the author (n = 18) distributed several (4-9) surveys each, to individuals they knew. They were instructed to attempt to distribute the survey to as wide a variety of individuals as was possible in terms of age, gender, religion, socio-economic status and cultural background.

The associates distributing the surveys were required to sign a consent form (see appendix A), in which they agreed to inform all individuals they approach about the study's general focus, and about its voluntary and anonymous nature.

Participants were not required to sign a consent form. However, after they had verbally agreed to participate in the study, they were given a participant information letter (see appendix B), which detailed procedures for completion of the survey. An information letter, survey, and a self-addressed, stamped, return envelope were provided for each participant. The information letter outlined the nature of the study, the estimated time for completion, a requested deadline date, and instructions aimed at ensuring that respondents completed the survey unaided and unaffected by the opinions of others. It was clearly explained that the names of those participating in the study would not be identified at all, thus ensuring anonymity and confidentiality. Respondents interested in obtaining general results of the study were invited to write the author to request this information.

In all, 115 people (of the 120 asked) verbally agreed to complete a survey and participate in the study. Of these 115, seventy-three (73) people actually responded by mailing in a survey for a true response rate of 61 percent.
Development of Scales: Validity & Reliability

After collection of survey data, item analysis and/or factor analysis of the major scales was carried out in order to establish their construct validity. The scales involved included the NDE knowledge scale, the NDE attitude scale, and the Threat Index. Internal consistency of the resulting factors was determined using Cronbach's Alpha reliability coefficient. Inter-item correlations were also calculated for each factor to assess homogeneity.

Where factor analysis was performed, the methods used followed the recommendations of Kline (1993, pp. 93-153). The proper number of factors for rotation was determined by scree plot analysis. Direct oblimin (an oblique) rotation was employed because, in every case, there was not "strong theoretical reason for assuming that the scales (factors) will be orthogonal" (uncorrelated). As Kline notes, "for oblique rotation, direct oblimin appears to be the best" (1993, p. 112).

NDE Knowledge Scale

Items were selected for inclusion into the NDE knowledge scale on the basis of item-analysis (Kline, 1993, pp. 145-52). Of the original 26 items, eight items were found to be indiscriminative based on, what Kline (1993) calls, their p value (see table 1). Kline defines p value, as it pertains to item-analysis, as being the percentage of the sample answering the item correctly. According to this method of item analysis, those questions which are too frequently answered correctly (more than 80% of respondents answering correctly), as well as those questions which are too infrequently answered correctly (less than 20% of respondents answering correctly) are not helpful in distinguishing between knowledgeable and unknowledgeable respondents, and thus should be eliminated from the scale.

Six items (survey question #50, 62, 63, 64, 65, and 66) had p values of below the .20 criterion of acceptability, and two items (#51 and 55) had p values of above the .80 criterion. Thus, these eight items were eliminated from the NDE knowledge scale for this study. Also, three additional items (#41, 42, and 59) were excluded from the scale due to their poor correlation (r < .30) with the overall scale, also a directive of Kline's item analysis (pp. 145-52).
**TABLE 1 - Item analysis of NDE knowledge questions**

<table>
<thead>
<tr>
<th>Question Item</th>
<th>P value</th>
<th>Standard Deviation</th>
<th>Correlation with overall scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>#55</td>
<td>.89 *</td>
<td>.32</td>
<td>.38</td>
</tr>
<tr>
<td>#51</td>
<td>.86 *</td>
<td>.35</td>
<td>.41</td>
</tr>
<tr>
<td>#61</td>
<td>.80</td>
<td>.36</td>
<td>.47</td>
</tr>
<tr>
<td>#48</td>
<td>.79</td>
<td>.41</td>
<td>.47</td>
</tr>
<tr>
<td>#46</td>
<td>.67</td>
<td>.47</td>
<td>.50</td>
</tr>
<tr>
<td>#57</td>
<td>.65</td>
<td>.48</td>
<td>.39</td>
</tr>
<tr>
<td>#52</td>
<td>.54</td>
<td>.50</td>
<td>.33</td>
</tr>
<tr>
<td>#47</td>
<td>.53</td>
<td>.50</td>
<td>.54</td>
</tr>
<tr>
<td>#58</td>
<td>.38</td>
<td>.45</td>
<td>.32</td>
</tr>
<tr>
<td>#43</td>
<td>.37</td>
<td>.45</td>
<td>.50</td>
</tr>
<tr>
<td>#59</td>
<td>.36</td>
<td>.44</td>
<td>.22 **</td>
</tr>
<tr>
<td>#53</td>
<td>.35</td>
<td>.44</td>
<td>.55</td>
</tr>
<tr>
<td>#42</td>
<td>.35</td>
<td>.43</td>
<td>.20 **</td>
</tr>
<tr>
<td>#54</td>
<td>.29</td>
<td>.41</td>
<td>.30</td>
</tr>
<tr>
<td>#49</td>
<td>.28</td>
<td>.41</td>
<td>.43</td>
</tr>
<tr>
<td>#44</td>
<td>.26</td>
<td>.41</td>
<td>.33</td>
</tr>
<tr>
<td>#45</td>
<td>.23</td>
<td>.41</td>
<td>.45</td>
</tr>
<tr>
<td>#41</td>
<td>.21</td>
<td>.39</td>
<td>.19 **</td>
</tr>
<tr>
<td>#56</td>
<td>.21</td>
<td>.36</td>
<td>.35</td>
</tr>
<tr>
<td>#60</td>
<td>.20</td>
<td>.36</td>
<td>.35</td>
</tr>
<tr>
<td>#64</td>
<td>.14 *</td>
<td>.35</td>
<td>.24 **</td>
</tr>
<tr>
<td>#62</td>
<td>.14 *</td>
<td>.35</td>
<td>.49</td>
</tr>
<tr>
<td>#66</td>
<td>.11 *</td>
<td>.32</td>
<td>.44</td>
</tr>
<tr>
<td>#63</td>
<td>.11 *</td>
<td>.32</td>
<td>.36</td>
</tr>
<tr>
<td>#65</td>
<td>.10 *</td>
<td>.30</td>
<td>.33</td>
</tr>
<tr>
<td>#50</td>
<td>.07 *</td>
<td>.25</td>
<td>.21 **</td>
</tr>
</tbody>
</table>

* indicates items eliminated from the scale due to p values of <.20 or >.80

** indicates items eliminated from the scale due to poor item-total correlations (r < .30)

It is important to note that item analysis performed on future studies using this revised Thornburg NDE knowledge scale may result in a different selection of (the original 26) NDE knowledge items. This is so, due to the fact that the NDE knowledge of future samples may differ from the sample in the present study, both in terms of type, and of level of NDE knowledge of respondents. The clear recommendation though, is to pose all 26 questions, since the Cronbach Alpha reliability coefficient for all 26 questions taken together showed significant internal consistency (.71) in this study.

After item analysis, the final NDE knowledge scale for this sample, consisting of 15 items, was tested for internal consistency using Cronbach's coefficient alpha and found to be acceptable (alpha=
Factor analysis was employed in an attempt to uncover separate, valid constructs for NDE knowledge. However, no clear factor structure emerged (see table 2 and Appendix D: figure 1).

**TABLE 2: Factor structure of the 15 item NDE knowledge scale**

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>#47</td>
<td>.66769</td>
</tr>
<tr>
<td>#53</td>
<td>.63690</td>
</tr>
<tr>
<td>#49</td>
<td>.54534</td>
</tr>
<tr>
<td>#46</td>
<td>.51246</td>
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<tr>
<td>#48</td>
<td>.51181</td>
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<tr>
<td>#60</td>
<td>.50831</td>
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<td>#61</td>
<td>.50665</td>
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<td>#57</td>
<td>.48129</td>
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<td>#44</td>
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<tr>
<td>#45</td>
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<td>#43</td>
<td>.41015</td>
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<td>#56</td>
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<td>#52</td>
<td>.36359</td>
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<tr>
<td>#58</td>
<td>.35984</td>
</tr>
<tr>
<td>#54</td>
<td>.27575</td>
</tr>
</tbody>
</table>

The scree plot failed to suggest a model with fewer than 15 factors, and, when the rotation of the five factors with eigenvalues above 1.00 was executed, the high inter-item correlations caused most items to load significantly on multiple factors. This normally would be grounds for an item's elimination from the scale (Kline, 1993, pp. 93-153). On a practical level, this unidimensionality of NDE knowledge makes sense, since any information on NDEs which participants might have previously acquired could have included content consisting of any or all of the questions in the scale (i.e., one wouldn't know only about the causes or the aftereffects of NDEs, without knowing something about the events of a typical NDE).

Further support to the validity of the 15 item scale's unidimensionality, and especially to its homogeneity, is provided by acceptable average item-total (.42) and inter-item (.21) correlations.

Some support for the external validity for the NDE knowledge scale developed in this study is provided by several facts: (1) an NDEr (who reported having actually had an NDE) scored significantly higher (x = 10) on this scale than did non-NDErs (x = 5.9), as shown by a Mann-Whitney nonparametric U test (p=.0558) and; (2) those who reported personally knowing an NDEr scored significantly higher (x = 7.2) on this scale than did those who did not know an NDEr (x = 5.9) as shown by a Mann-Whitney test (p=.1028). Both of the above findings would be expected of a valid NDE knowledge scale, since NDErs and those who know NDErs would be expected to have first hand knowledge of NDEs, and also would be expected to be more motivated to pursue information on
NDEs.

**NDE Attitude Scale**

In order to construct a valid NDE attitude scale, factor analysis was employed to determine construct validity (Kline, 1993, pp. 134-45). A scree plot of the 20 item scale, and subsequent analysis of resulting Eigenvalues suggested extracting and rotating two factors (see table 3a and Appendix D: figure 2a).

**TABLE 3a - Factor structure of the 20 item NDE attitude index**

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>#81</td>
<td>.92033</td>
<td></td>
</tr>
<tr>
<td>#85</td>
<td>.87197</td>
<td></td>
</tr>
<tr>
<td>#73</td>
<td>.82947</td>
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<td>#77</td>
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<td>#78</td>
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<td>#88</td>
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<td>#74</td>
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<td>.74179</td>
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<tr>
<td>#72</td>
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<td>#71</td>
<td>.72171</td>
<td>.46461</td>
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<td>#70</td>
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<td>.35458</td>
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<td>#80</td>
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<td>.83268</td>
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<td>#89</td>
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<td>.76197</td>
</tr>
<tr>
<td>#75</td>
<td>.25984</td>
<td>.65603</td>
</tr>
</tbody>
</table>

* Only factor loadings above .30 are shown here.

Examination of the resulting factor matrix revealed that questions designed to assess respondents' interest in NDEs, belief in NDEs, and the degree to which respondents felt NDEs were important, and uplifting, were all related to a single factor. Questions comprising the second factor (survey question #75, #83, and #89) dealt with respondents' degree of fear of NDEs, and so this factor was named "fear of NDEs". Together, these two factors explained 61.5% of the variance between the 20 items.

Item-analysis of survey questions #75, 83, and 89 revealed tremendously skewed responses to each of these three questions, in that for each, over 90% of respondents agreed or strongly agreed that they did not fear NDEs. Because these strongly skewed results may have affected the factor analysis, a
second factor analysis was conducted with these three items omitted (Kline, 1993, pp. 93-153). The resulting scree plot of the 17 items included in this second factor analysis, and subsequent analysis of the resulting Eigenvalues revealed that these 17 items were indeed associated with one single factor (see Table 3b and Appendix D: figure 2b).

**TABLE 3b - Factor structure of the 17 NDE attitude questions comprising factor 1**

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>#81</td>
<td>.91088</td>
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<tr>
<td>#85</td>
<td>.85119</td>
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<tr>
<td>#77</td>
<td>.83125</td>
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<tr>
<td>#88</td>
<td>.81893</td>
</tr>
<tr>
<td>#73</td>
<td>.81434</td>
</tr>
<tr>
<td>#78</td>
<td>.80259</td>
</tr>
<tr>
<td>#74</td>
<td>.79083</td>
</tr>
<tr>
<td>#79</td>
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<td>#84</td>
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<tr>
<td>#72</td>
<td>.73062</td>
</tr>
<tr>
<td>#80</td>
<td>.67472</td>
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<tr>
<td>#76</td>
<td>.66720</td>
</tr>
<tr>
<td>#82</td>
<td>.66242</td>
</tr>
<tr>
<td>#87</td>
<td>.65915</td>
</tr>
<tr>
<td>#70</td>
<td>.65118</td>
</tr>
</tbody>
</table>

*Only factor loadings above .30 are shown here.*

This one factor accounted for 58.3% of the variance of these 17 items. Since this factor was comprised of a variety of a priori 'aspects' of NDE attitude, such as belief, interest, and importance, this factor was named "general positiveness toward NDEs".

Analysis of the 20 item NDE attitude index, then, revealed 2 distinct factors or aspects of NDE attitude for this sample: (1) general positiveness toward NDEs (17 items); and (2) fear of NDEs (three items: survey questions #75, 83, & 89).

Since the factor loadings of future studies using this scale will undoubtedly differ from those attained here, the 17, and 3 items included in factors 1 and 2, respectively, have NOT been weighted according to their factor loading, or any other weighting system. Likert scale scores on the items comprising these factors have simply been added in order to calculate respondents' 'factor scores' (personal communication, Bonnie Erikson, April, 1995).

It should also be noted that analysis of NDE attitudes in this study not only involved statistical comparisons using the above two factors, but also involved statistical comparisons using each of the 20 NDE attitude questions, on their own.
Internal consistency was established for each factor through Cronbach Alpha Reliability Coefficients of .95 and .73 for factors one (17 items), and two (3 items) respectively.

Homogeneity of factor items was also demonstrated by the high average inter-item correlations within each of the two factors (.55 for factor one; and .47 for factor two).

External validity is evident for the first NDE attitude factor (general positiveness toward NDEs) in that respondents selecting explanation five to survey question 90 (5: "NDEs are possible evidence of life after death") had significantly higher scores (actually rankings) on this factor than did those who selected other explanations (as measured by the Kruskal-Wallis nonparametric ANOVA, p=.05).

The Threat Index

With respect to the Threat Index, the 25 items of the Moore and Neimeyer's TI-25 were factored together, and the scree plot and subsequent analysis of the resulting Eigenvalues suggested that these items all belonged to one general factor (see Table 4 and Appendix D: figure 3). This one factor accounted for 38.2% of the variance of the items.

*TABLE 4: Factor structure of the 25 item Threat Index*

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN</td>
<td>.80300</td>
</tr>
<tr>
<td>FEELSGOOD</td>
<td>.79671</td>
</tr>
<tr>
<td>HAPPY</td>
<td>.78431</td>
</tr>
<tr>
<td>PRODUCTIVE</td>
<td>.78015</td>
</tr>
<tr>
<td>EXISTENTIALISM</td>
<td>.76869</td>
</tr>
<tr>
<td>UNDERSTANDING</td>
<td>.72433</td>
</tr>
<tr>
<td>PEACEFUL</td>
<td>.71823</td>
</tr>
<tr>
<td>USEFUL</td>
<td>.71249</td>
</tr>
<tr>
<td>COMPETENT</td>
<td>.68618</td>
</tr>
<tr>
<td>HEALTHY</td>
<td>.65197</td>
</tr>
<tr>
<td>HOPE</td>
<td>.64985</td>
</tr>
<tr>
<td>ANIMATE</td>
<td>.64915</td>
</tr>
<tr>
<td>STRONG</td>
<td>.63924</td>
</tr>
<tr>
<td>ALIVE</td>
<td>.63687</td>
</tr>
<tr>
<td>HELP OTHERS</td>
<td>.62759</td>
</tr>
<tr>
<td>OBJECTIVE</td>
<td>.54996</td>
</tr>
<tr>
<td>CRAZY</td>
<td>.53488</td>
</tr>
<tr>
<td>PREDICTABLE</td>
<td>.50881</td>
</tr>
<tr>
<td>SECURE</td>
<td>.50208</td>
</tr>
<tr>
<td>LEARNING</td>
<td>.49767</td>
</tr>
<tr>
<td>EASY</td>
<td>.48101</td>
</tr>
<tr>
<td>CHANGING</td>
<td>.44787</td>
</tr>
<tr>
<td>CONFORM</td>
<td>.42000</td>
</tr>
<tr>
<td>CONCRETE</td>
<td>.17151</td>
</tr>
<tr>
<td>SPECIFIC</td>
<td>.13466</td>
</tr>
</tbody>
</table>
These 25 items, taken together as a scale, displayed a high degree of internal consistency (Cronbach Alpha reliability coefficient of .92). Due to: (1) this very high internal consistency; (2) a sufficiently strong inter-item correlation average of .32, and; (3) because more advanced statistical techniques (including LISREL confirmatory analysis) have previously identified these 25 items as representing one "global" factor (Moore & Neimeyer, 1991), these items have also been considered as comprising a single scale in the present study.

In addition to the 25 item Threat Index, two additional items of the same (split choice) format were included in the survey. These two items, along with five items already present in the 25 item T.I., comprise the seven item, factorially "pure" T.I.-7, developed by Neimeyer, Moore, and Bagley (1988), which they claim holds promise for "future research" (1988), and which, they advise, may be successfully used as a brief, unidimensional form of the instrument (1994, p.101). For this sample, the average inter-item correlations of these same seven items was calculated to be quite high at .4821. This seven item scale's internal consistency, as measured by Cronbach's coefficient Alpha was .8719.

The 7 items of the Neimeyer, Moore, and Bagley (1988) T.I.-7 were factored together and the scree plot and subsequent analysis of the resulting Eigenvalues suggested that these items all belonged to one general factor (see table 5 and Appendix D: figure 4). This one factor accounted for 55.9% of the variance of the items.

\[
\begin{array}{l|l}
\text{Item} & \text{Factor 1} \\
\hline
\text{GOOD} & .81925 \\
\text{PEACEFUL} & .78455 \\
\text{UNDERSTANDING} & .77236 \\
\text{EXISTENCE} & .77212 \\
\text{HOPE} & .75021 \\
\text{HEALTHY} & .68642 \\
\text{SATISFIED} & .63188 \\
\end{array}
\]

Inter-scale Pearson correlations were calculated between the Threat Indices. The TI-25 and the TI-7 displayed a correlation of .9499, thus supporting Neimeyer, Moore, and Bagley's (1988) suggestion that the TI-7 may, indeed, be used as a brief, unidimensional form of the instrument.
DATA ANALYSIS

In this section the methods of data analysis are outlined including the statistical approach used to answer each of the research questions stated at the conclusion of the literature review. This analysis involves the use of scales (concerning: NDE knowledge and NDE attitudes) developed as a part of this study and outlined in the previous section. It also involves use of the Threat Index, demographic questions, and individual questions designed to assess NDE knowledge and attitudes, and life and death attitudes. These have been described in a previous section entitled "Instrument and survey question design".

Data were analyzed using the SPSS program for Windows. Measures of central tendency and variability were used to analyze distribution normality of variables. Descriptive statistics were used to describe the demographic variables, NDE knowledge and attitudes, and life and death attitudes of the sample. These descriptions satisfactorily answered research questions one (part a), two (part a), and three (parts a and b) which call for descriptions of the samples' NDE knowledge, NDE attitudes, and life and death attitudes, respectively.

In all statistical analyses of this survey data, p values (probability of an event occurring due simply to chance) of 0.05 or below were taken as representing statistical significance, while p values of between 0.05 and 0.10 were interpreted as indicating a statistical "trend". Statistical trends have received mention due to the relatively small comparison groups (overall sample size is only 73) used in this analysis. Such trends may or may not have been statistically significant, had the sample size been larger.

Parametric methods of statistical analysis were consistently used for those continuous level variables (including individual Likert questions) which displayed normal or near-normal distributions. Nonparametric statistics were used for those continuous level variables (including individual Likert questions) which displayed markedly skewed distributions, and were also used for nominal level data. The use of nonparametric statistics in these cases was seen as preferable to the cumbersome task of transforming all skewed data to meet parametric requirements, given the large number of variables gathered in this study, and given the fact that this study's focus was merely to uncover general trends in the sample at hand, rather than to accurately assess attitudes of the entire population per se (McCall, 1986, pp. 316-17; Shavelson, 1988, pp. 432-433).

In cases where both variables being compared were continuous level data, correlation coefficients were calculated to measure the level of association between the two variables. Appropriate
(parametric Pearson product-moment, or nonparametric Kendall Tau) correlation coefficients were used to analyze the correlation between NDE knowledge and NDE attitude factors. Such statistics were also used to calculate the correlation between (a) NDE knowledge and (b) NDE attitudes and the following: the TI-25; the TI-7; death attitude questions; life attitude questions and; certain (continuous level) demographic variables (i.e., age, years of schooling, importance of religion, frequency of death thoughts, strength of belief in life after death, and extent of discussions regarding the topic of death with loved ones).

Appropriate nonparametric analysis of variance (ANOVA) tests (specifically, Kruskal-Wallis H tests), Mann-Whitney U tests (which are nonparametric "t-tests"), or parametric one-way ANOVA with Duncan t-tests were conducted to compare the relationship of discrete level data (e.g., data derived from survey question #90) with continuous level data (including NDE attitude factors and also those individual Likert questions which were not significantly skewed - and thus qualified as continuous level data).

In order to answer research question number four, which inquires about any relationship between NDE knowledge and NDE attitudes, nonparametric Kruskal-Wallis ANOVA tests and Mann-Whitney tests were conducted between key independent NDE knowledge variables (including: NDE knowledge scale scores, and variables which assessed: whether respondents have heard of NDEs; have had one; and/or know someone who's had one) and the dependent NDE attitude variables (NDE attitude scores, and scores on individual NDE attitude Likert scale questions).

Crosstabs (including Chi square statistics) were calculated when comparing variables which were both discrete level data. Thus, in answering research question number four, concerning any association between NDE knowledge and NDE attitudes, NDErs were compared to non-NDErs (survey question #91), and those who know NDErs were compared to those who do not (survey question #92) in terms of the responses of each of these groups to: (1) survey question number 68 (whether NDE information had "affected" them) and; (2) survey question number 90 (best explanation of NDEs).

Research question number five inquires as to whether having more knowledge about NDEs is associated with a distinctive pattern of death attitudes and/or life attitudes, for this sample. To answer this research question, nonparametric Kruskal-Wallis ANOVA tests and Mann-Whitney tests were conducted between key independent NDE knowledge variables (including: NDE knowledge scale scores and variables which assessed: whether respondents have heard of NDEs; have had one; and/or know someone who's had one) and dependent life and death attitude variables (Threat Index scores, and scores on individual life and death attitude Likert scale questions).
Research question number six asks: Is having a more positive attitude toward NDEs associated with a distinctive pattern of death attitudes and/or life attitudes, for this sample? For the purpose of answering this research question, nonparametric Kruskal-Wallis ANOVA tests and Mann-Whitney tests were conducted between key independent NDE attitude variables (NDE attitude factor scores, and scores on individual NDE attitude Likert scale questions) and dependent life and death attitude variables [Threat Index factor scores and scores on individual life and death attitude Likert scale questions].

Summary

This chapter has outlined the methodology used in this study and includes sections on: concerns with previous research on NDE and death attitudes; instrument and survey question design; data collection procedures; the development of NDE knowledge and NDE attitude scales and; methods of data analysis.

The methods chosen and implemented in this research study are consistent with accepted practices of survey and scale design and construction (Abdel-Gaid, Trueblood, & Shrigley, 1986; Edwards, 1957, pp.1-17; Kline, 1993, pp. 93-153) and data collection and analysis (McCall, 1986; Shavelson, 1988).

The next chapter will outline the results from the survey data including a description of respondents' characteristics and data collected to answer each of the research questions presented at the conclusion of the literature review.

Endnotes for Methodology chapter

1. Representative questions from two of LAP factors have not been included. The LAP factor of "death acceptance" is already dealt with in the DAP-R, and therefore its inclusion here would be redundant. A question representative of the LAP factor of "goal seeking" has not been included because it was felt that this dimension would be adequately assessed through survey question #29 ["I want to find (a) meaning for my life"], which is representative of a similar LAP factor, "will to meaning" (Reker and Peacock, 1981).
RESULTS

Characteristics of Respondents

In total, 120 people were approached to participate in the study. Only five of those persons who were asked to participate refused to do so. Therefore, 115 surveys were distributed. Since 73 usable surveys were returned, and 120 people were asked to participate, the true response rate was 61%. Key characteristics of the respondents are depicted in Table 6.

Table 6: Key Characteristics of the Sample

<table>
<thead>
<tr>
<th>Sample size:</th>
<th>73 (42 Females; 29 Males)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response rate:</td>
<td>61% (n=73 out of 120)</td>
</tr>
<tr>
<td>Mean age:</td>
<td>40.45 years (range: 20-82 years)</td>
</tr>
<tr>
<td>Mean years of schooling:</td>
<td>15.8 years (94% completed high school)</td>
</tr>
<tr>
<td></td>
<td>(60% completed at least a university bachelor's degree)</td>
</tr>
<tr>
<td>Protestant</td>
<td>42% (n=31)</td>
</tr>
<tr>
<td>No Religious affiliation</td>
<td>21% (n=15)</td>
</tr>
<tr>
<td>Catholic</td>
<td>17% (n=13)</td>
</tr>
<tr>
<td>Jewish</td>
<td>8% (n=6)</td>
</tr>
<tr>
<td>&quot;Other&quot;</td>
<td>7% (n=5)</td>
</tr>
<tr>
<td>Atheist</td>
<td>3% (n=2)</td>
</tr>
</tbody>
</table>

Of those among the participating sample who indicated their gender (two did not indicate this), 41% were males and 59% were females. The average age of respondents was 40.45 years (range 20-82). The average age for women (42.81 years) was not significantly different (p = .11) than that for men (37.03 years).

Respondents appeared, overall, to be well educated. Commencing with and including grade one, respondents reported a mean of 15.81 years of schooling, with a range of 0 to 22 years. Almost all respondents (95%) had completed a high school education, with 25% indicating this to be their highest level of completed formal studies. Respondents with a community college diploma amounted to 10% of the sample, while those who indicated that their highest level of education was a university bachelors degree represented 44% of respondents. A further sixteen percent (16%) of the sample had completed a university post-graduate or professional degree.

With regard to religious affiliation, the largest four groups were: Protestants (42%); those claiming no religious affiliation (21%); Catholics (18%), and; Jews (8%).

While a small number of individuals claimed affiliation to other religious groups [Hindu (3%);
"other" (3%, including one Zoroastrian respondent); atheist (3%) and; Muslim (1%)], all of these respondents were also combined in a single category, called "other" (10%). This was done in an attempt to maintain religious categories with numbers sufficient for statistical comparison. It should be noted, however, that nonparametric statistical comparisons were also made for each of these "other" religious affiliations, on every occasion which called for comparison between religious categories.

Since more respondents than expected chose "no religious affiliation" (21%) and fewer than expected chose "atheist" (3%), it is possible that some people may have chosen the former, partly or wholly because the term "atheist" was not defined in the question, and/or because the option "no religious affiliation" appeared before "atheist" in the order of fixed choices for this question.

A majority of respondents (58%) in the sample indicated that, "yes", they believed in some form of "life" after death, while 18% said "no" they didn't, and 25% were undecided.

When asked how important spirituality or religion was in their lives, 43% of respondents either indicated that it was "very important" or "quite important", 27% stated that it was "moderately important", and 30% said that it was either "not very important" or "not at all important".

Respondents were asked: Over the past year, how often have you thought about your own death? The results were as follows: 4% selected "daily", 17% chose "weekly"; 22% circled "monthly"; 51% selected "yearly/hardly ever" and; 6% chose "never".

Participants were asked to indicate to what extent they had discussed the issue of death with person(s) significant to them. None of the respondents indicated that they had done so "a lot", 15% said they had "quite a bit", 39% claimed they had done so "somewhat", 33% indicated they had "very little", and 13% responded that they had "not at all" discussed the issue of death with persons significant to them.

**NDE knowledge**

Approximately 90% (n=65) of respondents indicated that they had heard of NDE reports before (after being given a general definition of what NDEs were). Very few (4%) indicated they had not heard of NDE reports, and a further 6% were uncertain.

In terms of the sources of NDE information (for the 90% of the sample who had heard of NDEs), Table 7 reveals that: a majority of respondents had acquired information about NDEs from the mass media (T.V., radio, movie, newspaper or magazine); a small, but significant, number of respondents had heard of them through a friend or family member, and; only a handful of respondents learned of NDEs through a health care professional.
Table 7: Sources of Information on Near-Death Experiences

<table>
<thead>
<tr>
<th>Source</th>
<th>% of sample acquiring NDE info. from source</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV, radio, or movie</td>
<td>79%</td>
</tr>
<tr>
<td>Newspaper or magazine</td>
<td>77%</td>
</tr>
<tr>
<td>Professional journal or book</td>
<td>30%</td>
</tr>
<tr>
<td>Through a friend</td>
<td>27%</td>
</tr>
<tr>
<td>Through a family member</td>
<td>14%</td>
</tr>
<tr>
<td>Via an educational course</td>
<td>12%</td>
</tr>
<tr>
<td>Through a clergy member</td>
<td>6%</td>
</tr>
<tr>
<td>Through a physician</td>
<td>6%</td>
</tr>
<tr>
<td>Through a social worker</td>
<td>5%</td>
</tr>
<tr>
<td>Through a nurse</td>
<td>1%</td>
</tr>
<tr>
<td>Through a psychiatrist/clinical psychologist</td>
<td>1%</td>
</tr>
</tbody>
</table>

* Note: the above percentages add up to more than 100% due to the fact that respondents could mention more than one source of information on NDEs.

When asked if they had ever had a personal experience similar to the NDE account described in this survey, 1% of respondents (n=1) claimed that they had, 94% indicated they had not, and 4% (n=3) were not certain.

Participants were asked whether they knew anyone personally (other than themselves) who believes they've had an NDE, 21% of respondents (n=15) stated that they did, 77% reported that they did not, and 3% were not certain.

When asked to list as many aspects about NDEs as possible, those who responded (n = 38) described an average of 3.78 elements of the 15 common NDE elements identified by Moody (1975); the number of elements identified here ranged from 1 to 7. Some explanation must be suggested for this low number of identified NDE elements. It may be that, as other authors posing this question have suggested (Bechtel et al., 1992, p. 166), respondents, while familiar with the term NDE, lacked a comprehensive understanding of the topic. However, it is also possible that respondents chose not to list all of the NDE elements they knew, either because they lacked complete confidence in their understanding of the subject, and/or because they didn't want to go through the trouble of listing everything they knew regarding NDEs. With over 40% of this sample not responding to this question, in a sample where 90% indicated familiarity with NDE reports, the latter explanation may well apply. In the future, therefore, open-ended questions, while they may aid in establishing a given individual's understanding of NDEs, are not recommended as a method of assessing overall NDE knowledge of a sample; at least not for research using a questionnaire format.
The sample's average on the 15 item NDE knowledge scale was 5.97, with a range from 0 to 13, out of 15. It is noteworthy that this sample was quite unknowledgeable about "unpleasant" NDEs, as evidenced by the fact that only 10-14% of respondents correctly answered survey questions #62 through 66 (these questions were, therefore, removed from the NDE knowledge scale used to evaluate this particular sample). This lack of knowledge regarding unpleasant NDEs may be due to the fact that "negative" NDE accounts have been far less frequently presented, to date, in the popular literature and in the media. These results should not discourage assessment of "negative" NDE knowledge in future research.

There was a positive (Pearson) correlation ($r = .5155$, $p=.000$) between respondents actual NDE knowledge scores and their estimated scores. This relationship is weaker than expected. Apparently, these respondents had only a general sense of how much they knew about NDEs.

Survey question number 39 asked participants to estimate the prevalence of NDEs in the North American adult population. The median (and most common) estimated prevalence was "1 out of every 1000 adults, with a range of responses of from "1 out of every 6 adults", to "1 out of every 100, 000, 000 adults". Interestingly, the individual who estimated the prevalence of NDEs to be "1 out of every 6 adults" was also the only individual in the sample to report actually having had an NDE.

**Correlates of NDE knowledge**

In order to determine which demographic variables in this sample were associated with more knowledge about NDEs, several statistical tools were used.

First, Pearson correlation coefficients were calculated to test the association between NDE knowledge scale scores ($N=72$) and continuous level demographic variables (e.g., age etc.).

**Table 8: Notable Correlations between NDE Knowledge and Demographic Variables**

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>Pearson correlation</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>$r = -.2083$</td>
<td>$p = .084^1$</td>
</tr>
<tr>
<td>Years of schooling</td>
<td>$r = -.223$</td>
<td>$p = .061^1$</td>
</tr>
</tbody>
</table>

$^1$ indicates statistical trend ($0.05 \leq p > 0.10$), but not significance.

While no significant correlations were found between NDE scale scores and such variables, there were nonsignificant trends evident, including: age ($r = -.2083$, $p=.084$); and years of schooling ($r = -.2234$, $p=.061$). In summarizing the results depicted in Table 8, for this sample, higher degrees of
NDE knowledge appear to be somewhat associated, though not significantly, with younger age, and relatively fewer years of schooling. Correlations between NDE knowledge scale scores and several variables were not statistically noteworthy, including: the importance of religion; strength of belief in life after death; frequency of death thoughts, and; frequency of discussions about death with loved ones.

Second, in order to better examine which demographic variables are related to NDE knowledge, respondents were divided into one of three groups based on their scores on the 15 item NDE knowledge scale: (1) low NDE knowledge (a score of 4 or below); (2) medium NDE knowledge (a score of between 5 and 7); (3) high NDE knowledge (a score of 8 or above). Thus, three groups with approximately equal sizes (n = 24, n = 28, and n = 20 for groups one, two, and three) were created.

Parametric t-tests were conducted between high and low NDE knowledge groups for continuous level demographic variables (e.g., age etc.). Results are depicted in Table 9.

<table>
<thead>
<tr>
<th>Variable</th>
<th>High knowledge</th>
<th>Low knowledge</th>
<th>Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of Schooling</td>
<td>14.7</td>
<td>16.4</td>
<td>t-test</td>
<td>p=.088 *</td>
</tr>
<tr>
<td>Strength of Belief in life after death</td>
<td>3.75</td>
<td>2.95</td>
<td>t-test</td>
<td>p=.056 *</td>
</tr>
<tr>
<td>Age</td>
<td>37.6</td>
<td>43.2</td>
<td>t-test</td>
<td>p=.180</td>
</tr>
</tbody>
</table>

* indicates statistical trend (0.05 ≤ p ≥ 0.10), but not significance.

Again, while no significant correlations were found between NDE scale scores and these variables, there were nonsignificant trends evident. Mean years of schooling was lower for the high NDE knowledge group, supporting the correlation data in Table 8. As well, the high NDE knowledge group indicated a trend toward greater strength of belief regarding life after death. Age, however, was not shown to be different between high and low NDE knowledge groups, in contrast to the correlation trend indicated in Table 8. Differences in the variables: importance of religion, frequency of death thoughts, and frequency of discussions about death with loved ones were not statistically noteworthy.

Third, in order to examine which demographic variables are related to NDE knowledge scale scores, appropriate statistical tests (i.e. parametric t-tests or ANOVA, or nonparametric tests if one of the group sizes was very small) were conducted between the various categories of discrete level demographic variables such as gender etc. Noteworthy results of these tests are depicted in Table 10.
Table 10: Differences in NDE Knowledge Scale Scores by NDE Familiarity

<table>
<thead>
<tr>
<th>Variable</th>
<th>$X_{yes}$</th>
<th>$X_{no}$</th>
<th>Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belief in life after death</td>
<td>6.29</td>
<td>4.38</td>
<td>t-test</td>
<td>$p=.042$ *</td>
</tr>
<tr>
<td>Heard of NDEs</td>
<td>6.32</td>
<td>2.00 (n=3)</td>
<td>Mann-Whitney</td>
<td>$p=.0175$ *</td>
</tr>
<tr>
<td>Had an NDE</td>
<td>10 (n=1)</td>
<td>5.91</td>
<td>Mann-Whitney</td>
<td>$p=.0453$ *</td>
</tr>
<tr>
<td>Know an NDEr</td>
<td>7.20</td>
<td>5.69</td>
<td>t-test</td>
<td>$p=.079$</td>
</tr>
</tbody>
</table>

*indicates statistical significance

1 indicates statistical trend ($0.05 \leq p \geq 0.10$), but not significance.

(Note: mean group scores have been provided for interest sake only; the Mann-Whitney test is based on rankings)

Compared to those who hadn't, respondents who believed in life after death, as well as those who had heard of NDEs, and those who had had an NDE all scored significantly higher on the NDE knowledge scale. A further statistical trend was evident, suggesting those who claimed to know an NDE scored higher, than those who did not, on the NDE knowledge scale.

Summary

In summarizing the NDE knowledge of this sample, several things should be reiterated. A vast majority of respondents (90%) had heard of NDEs (mostly through multimedia or print), 15 respondents reported knowing an "NDEr" (individuals claiming to have had an NDE), and one respondent claimed to have experienced an NDE himself. NDE knowledge scale scores of this sample displayed low to moderate NDE knowledge level, with a wide range of scores indicated.

An examination of Tables 8, 9, and 10 reveals that, for this sample, greater NDE knowledge may be related to: (1) belief in life after death; (2) having experienced an NDE; and even merely (3) having heard of NDEs. In addition, nonsignificant trends indicate that a higher degree of NDE knowledge may possibly be related to: (4) knowing an NDEr; (5) relatively less years of formal schooling, and; (6) younger ages.

It is important to note that the above findings have, in no way, established that acquiring knowledge about NDEs causes the particular attitudes or behaviours mentioned above. Longitudinal methods would need to be employed in order to attempt to establish such causality.
NDE Attitudes

The sample's mean Likert scale score on the 17 questions comprising the first NDE attitude factor (General Positiveness towards NDEs) was 3.35, with a range of means from 1.88 to 4.76, on a Likert scale from one to five. This reflects a neutral to slightly positive average attitude toward NDEs.

The sample's average on the three questions comprising the second factor (Fear of NDEs) was 1.96, with an average range of from 1 to 3.67, on a Likert scale from one to five. This reflects a low degree of fear of NDEs.

After reading the NDE vignette provided in the survey (see appendix C), respondents were asked to select which, of nine explanations, they felt best explains the account. Results are shown in Table 11. The most common explanation, selected by 49% of the sample, was that "it was possible evidence for life after death" (57% of women chose this, and only 37% of men). In addition, 35% of the sample chose "I don't know how to explain it" as their preferred explanation. It is interesting that only 16% of the sample (12% of females, 23% of males) chose an explanation that directly challenges the objective validity of NDEs.

Table 11: Q#90 - Best Explanation for the NDE Vignette Provided (N=72)

<table>
<thead>
<tr>
<th>Explanation</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) &quot;It was a passing hallucination.&quot;</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>2) &quot;It was a dream.&quot;</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>3) &quot;It was the beginning of a mental illness.&quot;</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>4) &quot;It was the side effect of medical drugs/techniques.&quot;</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>5) &quot;It was possible evidence for life after death.&quot;</td>
<td>35</td>
<td>49%</td>
</tr>
<tr>
<td>6) &quot;It was the product of a vivid imagination.&quot;</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>7) &quot;It was material brought forth from the mind's unconscious.&quot;</td>
<td>6</td>
<td>8%</td>
</tr>
<tr>
<td>8) &quot;I don't know how to explain it.&quot;</td>
<td>25</td>
<td>35%</td>
</tr>
<tr>
<td>9) &quot;Other explanations.&quot;</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>

In survey question #94 (parts a-e) respondents were asked to respond to the following statement: In the future, the following persons should be prepared to discuss NDEs with individuals
who want to discuss the topic. Results are shown in Table 12a.

Table 12a: Q#94: Should Health Care Workers Be Prepared to Discuss NDEs?

<table>
<thead>
<tr>
<th>Question</th>
<th>SD</th>
<th>D</th>
<th>?</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Nurses</td>
<td>8%</td>
<td>17%</td>
<td>9%</td>
<td>53%</td>
<td>13%</td>
</tr>
<tr>
<td>b) Clergy</td>
<td>1%</td>
<td>13%</td>
<td>4%</td>
<td>52%</td>
<td>30%</td>
</tr>
<tr>
<td>c) Social Workers</td>
<td>3%</td>
<td>15%</td>
<td>11%</td>
<td>59%</td>
<td>11%</td>
</tr>
<tr>
<td>d) Physicians</td>
<td>6%</td>
<td>14%</td>
<td>7%</td>
<td>58%</td>
<td>15%</td>
</tr>
<tr>
<td>e) Psychiatrists/Clinical Psychologists</td>
<td>1%</td>
<td>8%</td>
<td>7%</td>
<td>54%</td>
<td>29%</td>
</tr>
</tbody>
</table>

(where SD = strongly disagree, D = disagree, ? = undecided, A = agree, SA = strongly agree)

It is noteworthy that more than two-thirds of respondents agreed or strongly agreed that nurses, social workers, and physicians should be prepared to discuss NDEs. Even more striking is the fact that more than four-fifths of respondents agreed or strongly agreed that clergy, and psychiatrists/psychologists should be prepared to discuss NDEs. Unlike normally distributed responses, where respondents display a range of opinions, and many are undecided, few, in this sample, were undecided about this topic. Only a small minority of respondents disagreed with the notion of health care professionals needing to be prepared to discuss NDEs.

Table 12 b: Mean Responses to Q#94 - for Different Explanations of NDE Vignette

<table>
<thead>
<tr>
<th>Question</th>
<th>Xoption 1</th>
<th>Xall other options</th>
<th>Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=35)</td>
<td>(n=37)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Nurses</td>
<td>3.94</td>
<td>2.97</td>
<td>t-test</td>
<td>p=.002*</td>
</tr>
<tr>
<td>b) Clergy</td>
<td>4.06</td>
<td>3.84</td>
<td>t-test</td>
<td>p=.498</td>
</tr>
<tr>
<td>c) Social Workers</td>
<td>3.86</td>
<td>3.34</td>
<td>t-test</td>
<td>p=.059</td>
</tr>
<tr>
<td>d) Physicians</td>
<td>4.03</td>
<td>3.25</td>
<td>t-test</td>
<td>p=.003 **</td>
</tr>
<tr>
<td>c) Psychiatrists / Clinical Psychologists</td>
<td>4.14</td>
<td>3.89</td>
<td>t-test</td>
<td>p=.338</td>
</tr>
</tbody>
</table>

*indicates statistical significance
† indicates statistical trend (0.05 ≤ p > 0.10), but not significance.
should be prepared to discuss NDEs, than did those who selected another explanation for the NDE vignette: This latter group’s mean answers suggest uncertainty here. Both groups felt that clergy and psychiatrists should be prepared to discuss NDEs.

Table 13a presents data on survey questions #96 through 100. Questions #96 to 99, when examined together, indicate that only approximately one-sixth of respondents disagreed with the notion that NDEs have the potential to help individuals to deal with death issues.

In question #100, respondents were asked to indicate their opinions on the following statement: The nature of NDEs appears to fit perfectly into my personal philosophy of death. A quite normally distributed range of responses is indicated.

Table 13a: Attitudes toward the Potential of NDEs to Help Those Dealing with Death

<table>
<thead>
<tr>
<th>Question</th>
<th>SD</th>
<th>D</th>
<th>?</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information on NDEs may be helpful to persons approaching death.</td>
<td>1%</td>
<td>15%</td>
<td>29%</td>
<td>47%</td>
<td>8%</td>
</tr>
<tr>
<td>Information on NDEs may be helpful to the families of persons approaching death.</td>
<td>---</td>
<td>18%</td>
<td>25%</td>
<td>49%</td>
<td>8%</td>
</tr>
<tr>
<td>Information on NDEs may be helpful to individuals who are worried about their own eventual deaths.</td>
<td>---</td>
<td>15%</td>
<td>18%</td>
<td>60%</td>
<td>7%</td>
</tr>
<tr>
<td>Information on NDEs may be helpful to individuals who are worried about a loved one who had died.</td>
<td>---</td>
<td>16%</td>
<td>22%</td>
<td>55%</td>
<td>7%</td>
</tr>
<tr>
<td>The nature of NDEs appears to fit perfectly into my personal philosophy of death.</td>
<td>5%</td>
<td>30%</td>
<td>33%</td>
<td>23%</td>
<td>8%</td>
</tr>
</tbody>
</table>

(where SD = strongly disagree, D = disagree, ? = undecided, A = agree, SA = strongly agree)

Table 13 b delineates the fact that respondents’ answers to survey question #96 through #100 differ greatly depending on whether the respondent believes that NDEs may be a glimpse at life after death or not. This table displays the fact that those who selected option five (belief that NDEs are "possible evidence for life after death") felt significantly more strongly that information on NDEs may be helpful to those dealing with death, compared to those who selected another explanation for the NDE vignette: This latter group generally were uncertain about whether or not NDE information would be helpful.
Table 13 b: Attitudes Concerning the Potential of NDEs: Believers vs. Others

<table>
<thead>
<tr>
<th>Question</th>
<th>X_{option 5}</th>
<th>X_{all other options}</th>
<th>Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information on NDEs may be helpful to persons approaching death.</td>
<td>3.80</td>
<td>3.13</td>
<td>t-test</td>
<td>(p=.009)*</td>
</tr>
<tr>
<td>Information on NDEs may be helpful to the families of persons approaching death.</td>
<td>3.83</td>
<td>3.16</td>
<td>t-test</td>
<td>(p=.009)*</td>
</tr>
<tr>
<td>Information on NDEs may be helpful to individuals who are worried about their own eventual deaths.</td>
<td>3.91</td>
<td>3.27</td>
<td>t-test</td>
<td>(p=.013)*</td>
</tr>
<tr>
<td>Information on NDEs may be helpful to individuals who are worried about a loved one who had died.</td>
<td>4.00</td>
<td>3.08</td>
<td>t-test</td>
<td>(p=.001)*</td>
</tr>
<tr>
<td>The nature of NDEs appears to fit perfectly into my personal philosophy of death.</td>
<td>3.63</td>
<td>2.39</td>
<td>t-test</td>
<td>(p=.000)*</td>
</tr>
</tbody>
</table>

* indicates statistical significance

A key aspect of assessing the "NDE attitudes" of this sample is investigating whether NDE information has had any effect(s) on respondents.

When asked, in survey question #68, whether the NDE vignette provided in this study, or any other information regarding NDEs, had "affected" respondents in any way, 41% claimed that it had done so, 53% indicated that it had not, and 5% were uncertain. With little variation, those respondents (n = 30) who claimed that NDE information had "affected" them reported that they believed such information reduced their fear of death through strengthening their beliefs in an afterlife. For example, one respondent explained that NDE information "gives hope of an afterlife, and a meaning to each individual's life". Another respondent commented that "I am now more sure that there is life after death", while yet another respondent wrote: "it (NDE information) has reduced my anxieties about death, because I now am more certain that there is life after death".

Survey participants who had heard of NDEs and knew enough about NDEs to have, in their own view, formed at least a vague opinion about them (n = 60), were asked to complete question #37a-q. This question attempts to assess whether some of the changes reported to have occurred in actual NDErs (Noyes, 1981; Ring, 1980, pp. 143-144; Flynn, 1982.; Greyson, 1983; Sabom 1982, p. 132), also occur in this sample of non-NDErs (although one respondent did claim NDEr status). These
responses may help in discerning the role, if any, of NDE information in having shaped life and death attitudes. Results are depicted in table 14.

Table 14: Self-reported effects of NDE information on respondents

<table>
<thead>
<tr>
<th>Question#37: What I've learned re: NDEs</th>
<th>SD</th>
<th>D</th>
<th>?</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) . . . has helped me to accept the life that I have lived so far&quot;</td>
<td>11%</td>
<td>35%</td>
<td>24%</td>
<td>25%</td>
<td>5%</td>
</tr>
<tr>
<td>b) . . . has made death seem more purposeful&quot;</td>
<td>8%</td>
<td>36%</td>
<td>31%</td>
<td>21%</td>
<td>3%</td>
</tr>
<tr>
<td>c) . . . has increased my understanding of death</td>
<td>10%</td>
<td>39%</td>
<td>21%</td>
<td>27%</td>
<td>3%</td>
</tr>
<tr>
<td>d) . . . has made my own life seem more meaningful&quot;</td>
<td>10%</td>
<td>42%</td>
<td>19%</td>
<td>24%</td>
<td>5%</td>
</tr>
<tr>
<td>e) . . . has increased my belief that I am in control of my life&quot;</td>
<td>10%</td>
<td>46%</td>
<td>21%</td>
<td>21%</td>
<td>2%</td>
</tr>
<tr>
<td>f) . . . has increased my desire to find meaning for my life&quot;</td>
<td>8%</td>
<td>45%</td>
<td>19%</td>
<td>24%</td>
<td>3%</td>
</tr>
<tr>
<td>g) . . . has increased my belief that I have a future purpose to fulfill&quot;</td>
<td>10%</td>
<td>47%</td>
<td>21%</td>
<td>18%</td>
<td>5%</td>
</tr>
<tr>
<td>h) . . . has increased my belief in life after death&quot;</td>
<td>11%</td>
<td>42%</td>
<td>13%</td>
<td>31%</td>
<td>3%</td>
</tr>
<tr>
<td>i) . . . has reduced my fear of death&quot;</td>
<td>11%</td>
<td>42%</td>
<td>13%</td>
<td>31%</td>
<td>3%</td>
</tr>
<tr>
<td>j) . . . has increased my beliefs in life after death&quot;</td>
<td>11%</td>
<td>24%</td>
<td>24%</td>
<td>36%</td>
<td>5%</td>
</tr>
<tr>
<td>k) . . . has given me a feeling of special importance&quot;</td>
<td>13%</td>
<td>50%</td>
<td>24%</td>
<td>10%</td>
<td>3%</td>
</tr>
<tr>
<td>l) . . . has given me a sense of relative invulnerability&quot;</td>
<td>16%</td>
<td>45%</td>
<td>26%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>m) . . . has led me to reevaluate my priorities in life&quot;</td>
<td>7%</td>
<td>47%</td>
<td>29%</td>
<td>15%</td>
<td>3%</td>
</tr>
<tr>
<td>(where SD = strongly disagree, D = disagree, ? = undecided, A = agree, SA = strongly agree)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In general, approximately half of respondents indicated that they disagreed or strongly disagreed that what they had learned about NDEs had affected them in the numerous ways shown. However, results from many of the above questions (# 37 a-q) also display that between one-quarter and one-third of respondents agree, or strongly agree, with these statements. Therefore, a large minority of respondents do think that information about NDEs has affected them in specific ways. Generally, these ways include having assisted the respondent in attaining (i.e., "causing", in their view) a more positive life and death attitude profile (see discussion).

Approximately one-third of respondents agreed or strongly agreed that what they had read about NDEs had: "increased my understanding of death" (see #37 d); "reduced my fear of death" (see #37 i); "increased my belief in life after death" (see #37 j); "made my own life seem more
meaningful" (see #37 e), and had; "helped me to accept the life that I have lived so far" (#37a).

Not all of these aftereffects, common among NDErs, were frequently claimed by respondents in this study. Only approximately one-sixth of respondents agreed or strongly agreed with the statement in questions that what they have learned about NDEs has given them: "a feeling of special importance" (#37 k); "a sense of relative invulnerability" (#37 l), and; "has led me to reevaluate my priorities in life" (#37 m).

Approximately one-quarter of those who responded to this question agreed or strongly agreed with the statement in question #37 f, that what they have learned about NDEs has increased their belief that they are in control of their lives. This indicates that, for a minority of respondents, NDEs may increase one's locus of control: one factor which has been thought to affect death attitudes (Epstein, 1980; Breznitz, 1983). It is also noteworthy, however, that 56 percent of respondents to this question clearly indicated that NDE material had not increased their sense of self-control over their own lives.

Approximately one-quarter of those who responded to this question agreed or strongly agreed with the statement in question #37 p, that what they have learned about NDEs has helped them to deal with the death of someone close to them. This indicates that some respondents feel NDE material has already been helpful to them. Again, it is also noteworthy that 61 percent of respondents to this question clearly indicated that NDE material had not helped them in this manner.

T-tests were conducted between respondents who selected option five on survey question #90 (indicating belief in NDEs as "possible evidence for life after death") and all other options. The dependent variables were the Likert responses to survey question #37, parts a through q (no table given). While responses differed significantly between these two groups for a majority of parts to question #37, the principal finding is that even those supporting the objective validity of NDEs, on average, expressed uncertainty (i.e., a mean Likert score of about 3) as to whether NDE information had caused these life and death attitude changes to occur at all. It has not been determined, then, which respondents had indicated, in Table 17, that NDEs had, indeed, affected them in a variety of life-enhancing ways. It is not merely those who believe that NDEs may be evidence of life after death.

Table 15 outlines the results of survey question #95, which asks participants to indicate with whom they would be comfortable discussing the topic of NDEs.

Table 15: Persons whom respondents would be comfortable discussing NDEs with
Survey Question #95

<table>
<thead>
<tr>
<th>Question</th>
<th>SD</th>
<th>D</th>
<th>?</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) with family members</td>
<td>—</td>
<td>10%</td>
<td>3%</td>
<td>64%</td>
<td>24%</td>
</tr>
<tr>
<td>b) with close friends</td>
<td>1%</td>
<td>6%</td>
<td>3%</td>
<td>68%</td>
<td>22%</td>
</tr>
<tr>
<td>c) with a physician</td>
<td>3%</td>
<td>19%</td>
<td>15%</td>
<td>49%</td>
<td>14%</td>
</tr>
<tr>
<td>d) with a nurse</td>
<td>5%</td>
<td>24%</td>
<td>11%</td>
<td>50%</td>
<td>10%</td>
</tr>
<tr>
<td>e) with a clergy member</td>
<td>4%</td>
<td>14%</td>
<td>13%</td>
<td>51%</td>
<td>18%</td>
</tr>
<tr>
<td>f) with a clinical psychologist/psychiatrist</td>
<td>1%</td>
<td>15%</td>
<td>8%</td>
<td>56%</td>
<td>19%</td>
</tr>
<tr>
<td>g) with a social worker</td>
<td>4%</td>
<td>26%</td>
<td>14%</td>
<td>46%</td>
<td>10%</td>
</tr>
</tbody>
</table>

(where SD = strongly disagree, D = disagree, ? = undecided, A = agree, SA = strongly agree)

It is evident in examining Table 15 that, in general, respondents in this sample would be quite comfortable discussing the topic of NDEs with others, especially family members and close friends. However, it is important not to overlook the sizeable minority (7-30%) who would not be comfortable discussing the topic of NDEs.

Correlates of NDE attitudes

First, as with NDE knowledge, Pearson correlation coefficients were calculated to test the association between NDE attitudes and continuous level demographic variables (e.g., years of schooling etc.). Significant results are given in Tables 16a and 16b.

Table 16a: Significant correlations between “Positiveness re: NDEs” and demographic variables

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>Pearson correlation</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of religion</td>
<td>r = .2414</td>
<td>p = .043 *</td>
</tr>
<tr>
<td>Frequency of discussions about death with loved ones</td>
<td>r = .3193</td>
<td>p = .007</td>
</tr>
</tbody>
</table>

* indicates statistical significance

With respect to the first NDE attitude factor (general positiveness towards NDEs), the only significant correlations were those between this factor and: importance of spirituality/religion and the frequency of discussions about death with loved ones. Correlations between this NDE attitude factor and several variables were not statistically noteworthy, including age, years of schooling; strength of belief in life after death, and frequency of death thoughts.
Table 16b: Significant correlations between "fear of NDEs" and demographic variables

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>Kendall Tau correlation</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of schooling</td>
<td>$r = -.1801$</td>
<td>$p = .050^*$</td>
</tr>
</tbody>
</table>

* represents statistical significance.

Analysis of the second NDE attitude factor (fear regarding NDEs) uncovered significant correlations including those between this factor and years of schooling, as determined by a nonparametric, Kendall Tau correlation coefficient, with more years of schooling associated with less fear of NDEs. Correlations between this NDE attitude factor and several variables were not statistically noteworthy, including: age; importance of religion/spirituality; strength of belief in life after death; frequency of death thoughts, and; frequency of death discussions with loved ones.

Second, in order to examine which demographic variables are related to NDE attitudes, appropriate statistical tests (i.e. parametric t-tests or ANOVA, or nonparametric tests if either sample size was very small) were conducted. Scores on both NDE attitude factors were compared across various categories of discrete level demographic variables, including gender. Significant results of these tests are depicted in Tables 17a and 17b.

Table 17a: Differences in "Positiveness Toward NDEs" scores (17 Likert items):

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group 1 mean</th>
<th>Group 2 mean</th>
<th>Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female 59.3</td>
<td>Males 53.7</td>
<td>t-test</td>
<td>$p = .050^*$</td>
</tr>
<tr>
<td>Belief in life after death</td>
<td>&quot;Yes&quot; 60.43</td>
<td>&quot;No&quot; 45.75</td>
<td>Duncan</td>
<td>$p &lt; .05^*$</td>
</tr>
</tbody>
</table>

* indicates statistical significance

Table 17b: Differences in "Fear of NDEs" scores (3 Likert items):

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group 1 mean</th>
<th>Group 2 mean</th>
<th>Test</th>
<th>Signif.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belief in life after death</td>
<td>&quot;Yes&quot; 5.70</td>
<td>&quot;Undecided&quot; 6.60</td>
<td>Kruskal-Wallis</td>
<td>$p=.0508^*$</td>
</tr>
<tr>
<td>Education</td>
<td>Bachelors 5.59</td>
<td>High School 6.61</td>
<td>Mann-Whitney</td>
<td>$p=.0220^*$</td>
</tr>
<tr>
<td></td>
<td>Post-graduate 5.25</td>
<td>High School 6.61</td>
<td>Mann-Whitney</td>
<td>$p=.0160^*$</td>
</tr>
</tbody>
</table>

Note: higher mean scores here indicate less fear of NDEs  * indicates statistical significance
(Note: mean group scores have been provided for interest sake only: the Mann-Whitney test is based on rankings)
In Table 17a, a t-test revealed that the average "positiveness toward NDEs" factor score for females was significantly higher than for males. Also evident in Table 17a, is the fact that those who indicated, on the third question of the survey, that they believed in some form of life after death and those who were undecided (not shown: X = 56.12) displayed mean NDE attitude factor one (positiveness toward NDEs) scores which were significantly higher than those who indicated that they didn't believe in life after death.

As shown in Table 17b, for NDE attitude factor two (fear of NDEs), both those who did believe and those who did not believe in life after death displayed significantly higher fear of NDEs than did those who were undecided. This data supports the parabolic relationship between religiosity (or, at least belief in life after death) and fear of death (or, at least, fear of NDEs) [see Discussion chapter].

Nonparametric, Kruskal-Wallis ANOVA tests failed to show any significant differences among any of the religious groupings for either of the two NDE attitude factors. However, it is interesting to note that the two respondents who identified themselves as belonging to "other" religions (one "Spiritualist" and one Zoroastrian) scored notably higher on the positiveness toward NDEs factor (X = 79.50) than did respondents from any of the other religious affiliations (who displayed averages in the 55.0 range for positiveness toward NDEs). In addition, the two atheists identified in this study scored clearly lower on the positiveness toward NDEs (X = 44.5) than did respondents of other religious affiliations, including "no religious affiliation".

Parametric ANOVA with Duncan tests failed to show any significant differences among any of the levels of education for NDE attitude factor one ("positiveness towards NDEs"), or for any of the survey questions comprising factor one. However, Mann-Whitney tests determined that there was a significant difference for the second NDE attitude factor ("fear of NDEs") between respondents with a university bachelor's degree and those with a high school diploma (p = .0220), and also between those with a post-graduate or professional degree and those with a high school diploma (p = .0160). In both cases, high school (only) graduates displayed lower fear of NDEs; although the level of fear for all groupings was actually quite low.

There were no other significant differences between other demographic groupings based on gender, completed level of education, having had an NDE, nor knowing an NDEr.
In summarizing the NDE attitudes of this sample, several things must be mentioned. A wide range of NDE attitudes are apparent throughout the survey. The average positiveness towards NDEs score is neutral to slightly positive (X = 3.35 Likert mean). Higher levels of positiveness toward NDEs appear to be associated with being female, and believing in life after death.

Fear of NDEs is very low, overall (X = 2.0 Likert scale mean). Lower levels of NDE fear may be associated with: being male, relatively less schooling, and; being undecided regarding one's belief in life after death.

In response to the written NDE vignette presented in the survey, 49% of respondents selected as the best response "it is possible evidence for life after death" and 35% chose "I don't know how to explain it". Only 16% of respondents chose an explanation which clearly challenges the objective reality of the experience.

As was noted when comparing NDE knowledge to demographic data, it is important to remember that the above findings have in no way established that developing a certain attitude toward NDEs causes or leads to the development of particular attitudes or behaviours mentioned above. Longitudinal methods would need to be employed in any attempt to establish such causality. However, in terms of respondents' own sense of their level of attitude change, 41% of the sample indicated that NDE information, such as that found in the vignette in this study, has "affected" them. Most often these individuals explained that they feel NDE information has reduced their fear of death through strengthening their belief in life after death. As well, results from survey question #37 (parts a-q) show that approximately 30% of respondents on any given question (#37a, #37c etc.) claimed that what they knew about NDEs had affected them in (an) identifiably positive, and perhaps life-enhancing, way(s).

Almost two-thirds of respondents felt that NDE information might be helpful to those who are facing death themselves, are worried about it, or are dealing with the (possible or previous) death of a loved one, compared to low levels (<18%) who felt NDE information would not be helpful to such persons.

A vast majority (66%-83%) of the sample agreed or strongly agreed that various health care workers should be "prepared" to discuss the topic of NDEs with patients. Few disagreed with this
The wide range of NDE attitudes displayed by this sample is exemplified in the wide range of responses to question #100: "NDEs appear to fit perfectly into my personal philosophy of death". Responses to this Likert scale question are quite normally distributed across all five Likert scale options from strongly disagree to strongly agree: Respondents most likely to agree were those who believe that NDEs are evidence for life after death.

Upon closer examination of the NDE attitudes of respondents in this sample, it becomes apparent that there are significant differences between those who believe NDEs are (possible) evidence for life after death (represented by the 35 respondents who indicated as such on survey question #90) and those who were not certain or who do not believe this (as indicated by respondent's selection of another option to survey question #90). In particular, those who expressed the belief that NDEs are possible evidence for life after death: (1) agreed (in some cases, significantly) more strongly that NDEs have affected them in a variety of life-enhancing ways; (2) agreed significantly more strongly that NDEs would be helpful to those dealing with death; (3) displayed significantly stronger convictions that doctors, nurses, and social workers should be prepared to discuss NDEs with individuals (note: a vast majority of all respondents felt clergy and psychiatrists/psychologists should be prepared to discuss NDEs), and; (4) indicated significantly more often that NDEs fit into their own "personal philosophies of death".

**Life & Death Attitudes**

Participants were asked whether they believed in some form of "life" after death. Approximately 57% reported that they did, 18% indicated that they did not, and 25% admitted that they were undecided on the issue.

Five questions, considered independently, were used to determine respondents' general life attitudes. The results of these questions are displayed in Table 18. Overall, a majority of respondents displayed positive attitudes towards life. More than half of respondents clearly agreed with statements that they did not feel the lack of - or, indeed, had discovered - a meaningful purpose for their lives.
Well over half indicated that they felt they have a future purpose to fulfil. More than two-thirds of respondents expressed an internal locus of control, agreeing with sentiments that they were in control of their own lives.

Table 18: Life attitude questions: Frequency Distributions

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>SD</th>
<th>D</th>
<th>?</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>#26 “I have discovered a meaningful purpose for my life”</td>
<td>–</td>
<td>22%</td>
<td>21%</td>
<td>38%</td>
<td>19%</td>
</tr>
<tr>
<td>#27 “I feel the lack of a meaningful purpose for my life”</td>
<td>25%</td>
<td>40%</td>
<td>18%</td>
<td>16%</td>
<td>1%</td>
</tr>
<tr>
<td>#28 “My life is in my own hands and I am in control of it”</td>
<td>4%</td>
<td>15%</td>
<td>12%</td>
<td>56%</td>
<td>12%</td>
</tr>
<tr>
<td>#29 “I want to find a meaningful purpose for my life”</td>
<td>8%</td>
<td>33%</td>
<td>11%</td>
<td>38%</td>
<td>10%</td>
</tr>
<tr>
<td>#30 “I feel I have a future purpose to fulfil”</td>
<td>1%</td>
<td>16%</td>
<td>23%</td>
<td>44%</td>
<td>15%</td>
</tr>
</tbody>
</table>

(where SD = strongly disagree, D = disagree, ? = undecided, A = agree, SA = strongly agree)

In analyzing the death attitude questions (survey questions #7-13), frequency distributions were generated. Results of these questions are displayed in Table 19.

Table 19: Death Attitude Questions: Frequency Distributions

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>SD</th>
<th>D</th>
<th>?</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>#7 “I believe that a pleasant afterlife will follow my death”</td>
<td>7%</td>
<td>11%</td>
<td>37%</td>
<td>33%</td>
<td>12%</td>
</tr>
<tr>
<td>#8 “I view my death as a relief from earthly suffering”</td>
<td>27%</td>
<td>34%</td>
<td>15%</td>
<td>21%</td>
<td>3%</td>
</tr>
<tr>
<td>#9 “I would rather avoid thinking about the topic of my death”</td>
<td>12%</td>
<td>49%</td>
<td>10%</td>
<td>23%</td>
<td>5%</td>
</tr>
<tr>
<td>#10 “I would neither fear my death nor welcome it”</td>
<td>3%</td>
<td>19%</td>
<td>19%</td>
<td>47%</td>
<td>12%</td>
</tr>
<tr>
<td>#11 “The fact that I will have to die some day makes me angry”</td>
<td>33%</td>
<td>47%</td>
<td>5%</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>#12 “I find the topic of my death to be depressing”</td>
<td>21%</td>
<td>38%</td>
<td>7%</td>
<td>30%</td>
<td>4%</td>
</tr>
<tr>
<td>#13 “The thought of my own death frightens me”</td>
<td>26%</td>
<td>36%</td>
<td>7%</td>
<td>27%</td>
<td>4%</td>
</tr>
</tbody>
</table>

(where SD = strongly disagree, D = disagree, ? = undecided, A = agree, SA = strongly agree)

Overall, a majority of respondents displayed positive attitudes towards death. This is indicated by the following: (1) Almost half of respondents clearly agreed with statements that they believed a pleasant afterlife would follow their deaths: Very few respondents disagreed with this sentiment [approach acceptance of death according to Wong et al.’s (1994) typology]; (2) almost two-thirds of respondents did not display escape acceptance (viewing death as an escape from earthly suffering), while only one-quarter did so; (3) almost two-thirds of respondents did not display death avoidance (desire to avoid thinking about the topic), while only slightly more than one-quarter did so; (4) well over half of respondents expressed neutral acceptance of death (would neither fear nor welcome it); (5)
a mere one-sixth indicated anger regarding their own mortality; (6) while one-third of respondents agreed that they found the topic of their death to be depressing, nearly two-thirds did not, and; (7) just under two-thirds of respondents claimed that the thought of their own deaths did not frighten them.

Statistical analysis was conducted on the Threat Index. The 25 item version had an average of 9.98 "splits" (dichotomous distinctions) between how respondents viewed their present lives and how they viewed their own hypothetical deaths. The range of respondents' splits on the TI-25 was 0 to 24 and, as mentioned in the methods section, the Cronbach Alpha coefficient of .92 indicated a high degree of internal consistency. The seven item version of the TI which had elsewhere been found to be "factorially pure" (Neimeyer, Moore, and Bagley, 1988, p. 217) was examined as well. The average number of splits for this version was 2.8, with a range from 0 to 7. The Cronbach Alpha coefficient of .87 also showed a high degree of internal consistency.

Summary

Both positive life & death attitudes are displayed by this sample. With respect to life attitudes, more than half (57%) agreed that they have discovered a meaningful purpose for their lives, while only one-fifth (22%) disagreed. In keeping with this profile, responses to the question of whether participants felt a lack of meaningful purpose for their lives indicated that 2/3 did not, while only one-sixth (16%) did feel such a lack. Over two-thirds (68%) of the sample indicated an internal locus of control over their own lives, while only one-fifth (19%) indicated an external locus of control. Approximately 3/5 (59%) of this sample believes they "have a future purpose to fulfil", while less than 1/5 (17%) did not believe this.

The death attitudes of this sample may also be characterized as being generally positive. Slightly less than 1/2 (45%) of the sample agreed that "a pleasant afterlife will follow" their deaths, as opposed to only 1/5 (19%) who disagreed with this notion. Almost 2/3 (62%) of respondents disagreed that they view their deaths "as a relief from earthly suffering", while only just over 1/3 (23%) agreed with this same statement. Approximately 3/5 (59%) of respondents agreed that they "would neither fear nor welcome" their own deaths, while 1/5 (22%) disagreed. Almost 2/3 (62%) disagreed that they "would rather avoid thinking about the topic" of their deaths, while less than 1/3 (29%)
NDE knowledge & NDE attitudes: their relationship

The fourth research question addresses the issue of whether having more knowledge about NDEs is associated with having a more positive attitude toward NDEs. To attempt to answer this question, several statistical techniques were used.

First, scores from the 15 item NDE knowledge scale were compared, via Pearson correlations, to the two NDE attitude factors, and also to every NDE attitude question (#70-89).

As indicated in Table 20, NDE knowledge scale scores were found to correlate significantly with the first NDE attitude factor (general positiveness toward NDEs) \(r = .4226, p=.000\), but not the second factor (fear of NDEs).

<table>
<thead>
<tr>
<th>NDE attitude factor</th>
<th>Correlation</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Positiveness toward NDEs&quot;</td>
<td>(r = .4226)</td>
<td>(p = .000^*)</td>
</tr>
<tr>
<td>&quot;Fear of NDEs&quot;</td>
<td>(r = -.1328)</td>
<td>(p = .266)</td>
</tr>
</tbody>
</table>

\(^*\) indicates statistical significance

The NDE knowledge scale also correlates significantly (and positively) with the following survey questions: #70, 71, 72, 73, 74, 76, 77, 79, 80, 81, 82, 84, 85, and 86 \((p \leq .05)\). These findings indicate that having more knowledge regarding NDEs may be associated with relatively higher levels of interest in NDEs and a belief in both their importance and objective validity, as well as possibly being associated with less fear concerning NDEs [the latter statement is considered a possibility since a significant trend in correlations was found between NDE knowledge and question #89, which measures fear of NDEs \((r = .19, p=.056)\)].

Second, three key descriptive aspects of ones' personal NDE "knowledge" (whether one has heard of NDEs, had an NDE, and knows someone who has had one) were compared with NDE attitude factors and questions (#70-89). Noteworthy results are presented in Table 21.
Table 21: personal NDE "knowledge" & NDE attitudes

<table>
<thead>
<tr>
<th>NDE attitude</th>
<th>X_YES</th>
<th>X_NO</th>
<th>Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heard of NDEs (N&quot;yes&quot;=64, N&quot;no&quot;=3)</td>
<td></td>
<td></td>
<td>Mann-Whitney</td>
<td>p=.0018*</td>
</tr>
<tr>
<td>Positiveness toward NDEs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had an NDE (N&quot;yes&quot;=1, N&quot;no&quot;=69)</td>
<td>58.5</td>
<td>39.7</td>
<td>Mann-Whitney</td>
<td>p=.2308</td>
</tr>
<tr>
<td>Positiveness toward NDEs</td>
<td></td>
<td></td>
<td>Mann-Whitney</td>
<td>p=.2308</td>
</tr>
<tr>
<td>#70 &quot;NDEs are an important topic for me to understand&quot;</td>
<td>5.00</td>
<td>2.87</td>
<td>t-test</td>
<td>p=.209</td>
</tr>
<tr>
<td>#72 &quot;I find the topic of NDEs to be very uplifting&quot;</td>
<td>5.00</td>
<td>2.88</td>
<td>t-test</td>
<td>p=.0746</td>
</tr>
<tr>
<td>#73 &quot;I am fascinated by the topic of NDEs&quot;</td>
<td>5.00</td>
<td>3.16</td>
<td>t-test</td>
<td>p=.0976</td>
</tr>
<tr>
<td>#80 &quot;NDEs are genuine glimpses into the life of the spirit after death&quot;</td>
<td>5.00</td>
<td>3.13</td>
<td>t-test</td>
<td>p=.0614</td>
</tr>
<tr>
<td>#85 &quot;I am curious to know more about NDEs&quot;</td>
<td>5.00</td>
<td>3.32</td>
<td>t-test</td>
<td>p=.0640</td>
</tr>
<tr>
<td>#89 &quot;I am not scared by the NDE reports I have heard&quot;</td>
<td>3.00</td>
<td>1.99</td>
<td>t-test</td>
<td>p=.0539</td>
</tr>
<tr>
<td>Know an NDE (N&quot;yes&quot;=15, N&quot;no&quot;=56)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positiveness toward NDEs</td>
<td></td>
<td></td>
<td>Mann-Whitney</td>
<td>p=.2308</td>
</tr>
<tr>
<td>#70 &quot;NDEs are an important topic for me to understand&quot;</td>
<td>3.40</td>
<td>2.80</td>
<td>t-test</td>
<td>p=.209</td>
</tr>
<tr>
<td>#73 &quot;I am fascinated by the topic of NDEs&quot;</td>
<td>3.67</td>
<td>3.09</td>
<td>t-test</td>
<td>p=.0976</td>
</tr>
<tr>
<td>#77 &quot;I do not have any desire to know about NDEs&quot;</td>
<td>4.13</td>
<td>3.48</td>
<td>t-test</td>
<td>p=.017*</td>
</tr>
</tbody>
</table>

*indicates statistical significance    * indicates statistical trend (0.05 ≤ p ≥ 0.10), but not significance.

Mann-Whitney nonparametric tests revealed that those who had heard of NDEs prior to the study displayed significantly more positiveness toward NDEs compared with those who hadn't heard of NDEs prior to this study. Those who had heard of NDEs prior to the study also displayed significantly higher scores on survey questions #71, 72, 73, 77, 79, 81, 82, 84, 85, 86, and 88 (p < .05) suggesting higher levels of expressed importance regarding, interest in, and belief in NDEs, as well as less fear concerning NDEs: although the second NDE attitude factor (fear of NDEs) was not notably different for any of the categories indicated in Table 21.

Table 21 also displays results from Mann Whitney tests which show that the individual who reported actually having had an NDE (referred to as an "NDEr", n=1) displayed higher scores on the "positiveness toward NDEs" factor than did non-NDErs. Although this difference was not statistically significant (p=.2308), this may be due to a sample group of only one NDEr, rather than a lack of any real differences between the two groups. This particular NDEr did display nonsignificant statistical trends (0.05 ≤ p ≥ 0.10) which indicated more positive attitudes toward NDEs on survey questions.
These questions inquired about the respondent's interest in, belief in, and importance ascribed to NDEs. Interestingly, this NDEr also indicated being undecided over whether he feared NDEs (based on his response to question #89), whereas an overwhelming majority of non-NDErs clearly indicated a lack of fear of NDEs.

T-tests revealed no statistically significant differences between those who knew an NDEr (n=15) and those who did not (n=55), in terms of either of the two NDE attitude factors. However, those who reported knowing an NDEr did display a statistical trend toward higher scores on survey questions #70, 73, 77 and 79 (0.05 < p ≤ 0.10) reflecting more interest in and importance ascribed to NDEs, than did respondents who did not know an NDEr.

Third, in the search for the relationship between NDE knowledge and NDE attitudes, low, medium, and high NDE knowledge groups (as established previously) were compared with NDE attitude factors, NDE attitude questions #70-89, and with key questions related to NDE attitude, by means of appropriate statistical tests.

Examination of parametric ANOVA with Duncan tests revealed significant differences between high, medium, and low NDE knowledge groups for the "positiveness toward NDEs" factor (p<.05). No differences were found between high, medium, and low NDE knowledge groups for the fear of NDEs factor. However, both high and medium NDE knowledge groups displayed a statistical trend of less fear of NDEs than the low knowledge group on survey question #89 which measures fear of NDEs (p=.0787). These results are depicted in Table 22.

<table>
<thead>
<tr>
<th>NDE attitude</th>
<th>XLow</th>
<th>XMedium</th>
<th>XHigh</th>
<th>Test</th>
<th>Signif.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positiveness re: NDEs</td>
<td>51.1</td>
<td>55.9</td>
<td>65.0</td>
<td>Duncan</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>#89 &quot;I'm not scared by the NDE reports I have heard&quot;</td>
<td>2.24</td>
<td>1.97</td>
<td>1.86</td>
<td>Kruskal-Wallis</td>
<td>p=.0787</td>
</tr>
</tbody>
</table>

* indicates statistical significance
' indicates statistical trend (0.05 < p ≤ 0.10), but not significance.

As a corollary to the comparisons made above, a parametric ANOVA with Duncan test was conducted between the high, medium, and the low "positiveness toward NDEs" groups to see if they had significantly different NDE knowledge scale scores. The mean NDE knowledge scale score of the high positiveness toward NDEs group (X_{high} = 7.54, n=24) was found to be significantly higher than for
the medium positiveness toward NDEs group ($X_{medium} = 5.57$, $n=24$), and low positiveness toward NDEs group ($X_{low} = 4.74$, $n=25$) ($p<.05$), confirming that those with a more positive attitude toward NDEs, did, indeed, display higher NDE knowledge scale scores.

ANOVA with Duncan tests indicated that individuals displaying a high level of NDE knowledge also displayed significantly higher scores than both their medium, and their low knowledge counterparts for question #36, parts a, b, and c. These results, which may have implications for analyzing the causality of NDE knowledge and attitudes (see discussion), are shown in Table 23.

Table 23: high, medium, & low NDE knowledge groups responses to survey question #36

<table>
<thead>
<tr>
<th>Question</th>
<th>$X_{Low}$</th>
<th>$X_{Medium}$</th>
<th>$X_{High}$</th>
<th>Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>#36) &quot;The very first time I heard about NDEs.....</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) &quot;I believed they were evidence for life after death&quot;</td>
<td>2.87</td>
<td>3.25</td>
<td>3.95</td>
<td>Duncan</td>
<td>$p&lt;.05$ *</td>
</tr>
<tr>
<td>b) &quot;I felt they were an important topic for the general public to know about&quot;</td>
<td>3.00</td>
<td>3.54</td>
<td>3.80</td>
<td>Duncan</td>
<td>$p&lt;.05$ *</td>
</tr>
<tr>
<td>c) &quot;I had a strong interest in them&quot;</td>
<td>2.87</td>
<td>3.29</td>
<td>3.81</td>
<td>Duncan</td>
<td>$p&lt;.05$ *</td>
</tr>
</tbody>
</table>

* indicates statistical significance

Table 24 indicates that individuals displaying a high level of NDE knowledge also displayed significantly higher scores than their low knowledge counterparts for the following: survey question #96, #97, #98, #99. These four questions show that those more knowledgeable about NDEs believe more strongly that NDEs may be helpful to individuals facing death issues, and; also for #100, indicating that those more knowledgeable about NDEs feel significantly stronger that NDEs fit into their personal philosophies of death.

Table 24: low, medium, & high NDE knowledge groups' attitudes toward of NDE info.

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>$X_{Low}$</th>
<th>$X_{Medium}$</th>
<th>$X_{High}$</th>
<th>Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>#96 &quot;Information on NDEs may be helpful to persons approaching death&quot;</td>
<td>3.19</td>
<td>3.40</td>
<td>3.86</td>
<td>ANOVA + Duncan</td>
<td>$p&lt;.05$ *</td>
</tr>
<tr>
<td>#97 &quot;Information on NDEs may be helpful to the families of persons approaching death&quot;</td>
<td>3.24</td>
<td>3.43</td>
<td>3.86</td>
<td>ANOVA + Duncan</td>
<td>$p&lt;.05$ *</td>
</tr>
<tr>
<td>#98 &quot;Info. NDEs may be helpful to individuals who are worried about their own eventual death&quot;</td>
<td>3.24</td>
<td>3.43</td>
<td>3.86</td>
<td>ANOVA + Duncan</td>
<td>$p&lt;.05$ *</td>
</tr>
<tr>
<td>#99 &quot;Info. on NDEs may be helpful to individuals who are worried about a loved one who has died&quot;</td>
<td>3.33</td>
<td>3.39</td>
<td>3.86</td>
<td>ANOVA + Duncan</td>
<td>$p&lt;.05$ *</td>
</tr>
<tr>
<td>#100 &quot;The nature of NDEs appears to fit perfectly into my personal philosophy of death&quot;</td>
<td>2.57</td>
<td>2.87</td>
<td>3.62</td>
<td>ANOVA + Duncan</td>
<td>$p&lt;.05$ *</td>
</tr>
</tbody>
</table>

* indicates statistical significance
Fourth, because one key NDE attitude question generated discrete level data, it was compared with the overall NDE knowledge scale, instead of being subject to the high versus low NDE knowledge group comparison. A Kruskal-Wallis nonparametric ANOVA revealed that those who selected option number five (the NDE vignette was best explained as "possible evidence for life after death") on question #90 displayed significantly higher NDE knowledge scores than did individuals selecting another option (X_{groups} = 7.03 versus X_{all other groups combined} = 5.02, p=.0210).

Summary

In summarizing whether having more NDE knowledge is associated with a more positive attitude toward NDEs for this sample, several points may be made.

Statistically significant correlations clearly suggested a positive association between NDE knowledge (as measured by scores on the NDE knowledge scale) and positiveness toward NDEs.

Mann-Whitney U tests indicate that there might be a relationship between having first-hand "knowledge" of NDEs (by having had one) and positiveness toward NDEs (since several survey questions displayed such statistical trends). There also is some indication that having second-hand "knowledge" of NDEs (by knowing an NDER) may be related to somewhat more positive opinion of NDEs, as several questions from the NDE attitude scale indicated this trend.

ANOVA with Duncan tests conducted between high, medium, and low NDE knowledge scale groups indicated that the higher knowledge group displayed significantly: (1) more positiveness toward NDEs, and possibly; (2) less fear of NDEs (e.g., on question #89).

The high NDE knowledge group's responses to survey question #36 (a-d) indicate that this group reported significantly higher initial belief in, perceived importance of, and interest in NDEs (i.e., the first time they were exposed to NDE information) than did the low NDE knowledge group, according to a t-test. These results may have implications for analyzing the causality of NDE knowledge and attitudes (see discussion chapter).

Finally, respondents indicating that the best explanation for an NDE vignette was that "it is possible evidence for life after death" scored significantly higher on the NDE knowledge scale than did those selecting other responses. This fact strongly confirms that positive NDE attitudes (belief etc.) and NDE knowledge are, indeed, related.
NDE knowledge: its' relationship to life & death attitudes

In addressing the fifth research question as to whether having more NDE knowledge was associated with a distinct pattern of death and/or life attitudes, several statistical tools were used.

Table 25: significant correlations: NDE knowledge scale scores and life & death attitudes

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Pearson Correlation</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>#30 &quot;I feel I have a future purpose to fulfil&quot;</td>
<td>$r = .4093$</td>
<td>$p = .000^*$</td>
</tr>
<tr>
<td>#7 &quot;I believe that a pleasant afterlife will follow my death&quot;</td>
<td>$r = .2339$</td>
<td>$p = .048^*$</td>
</tr>
</tbody>
</table>

* indicates statistical significance

As Table 25 reveals, in terms of life attitudes, NDE knowledge scale scores only correlated significantly (and did so positively) with respondents' feelings that they have a future purpose to fulfil. In terms of death attitudes, NDE knowledge scale scores were found to correlate: positively with approach acceptance of death, the belief that "a pleasant afterlife will follow" death. No other correlations between NDE knowledge scale scores and death attitude factors and questions (including the Threat Indices), nor life attitude questions, were statistically noteworthy. Second, two key descriptive aspects of one's NDE knowledge (whether one has had an NDE and knows an NDEr) were compared with all death attitude and questions, and with each life attitude question. Table 26 reveals important results.

As Table 26 indicates, Mann-Whitney tests revealed statistical trends in which, compared to all other respondents, the one NDEr displayed: (1) higher approach acceptance; (2) higher escape acceptance, and; (3) lower avoidance of topic of their own death. In addition, while nonsignificant statistically, the differences between the NDEr's responses and average non-NDEr responses to many other life and death attitude questions are also striking. In particular, the one NDEr strongly agreed that he had "discovered a meaningful purpose" for his life, and strongly disagreed with statements calling his death frightening or depressing. The NDEr's scores on the Threat Index were far lower than the sample average. The findings for this NDEr are, consistent with research describing other NDEr's life and death attitudes (Greyson, 1994; Noyes, 1980; Sabom, 1982) and indicate that NDErs possess a positive profile of life and death attitudes.
Table 27: Life and death attitude differences: NDEr versus all non-NDErs

<table>
<thead>
<tr>
<th>Survey Question/Attitude</th>
<th>X_NDE</th>
<th>X_non-NDE</th>
<th>Mann-Whitney test</th>
<th>Signif.</th>
</tr>
</thead>
<tbody>
<tr>
<td>#26 &quot;I have discovered a meaningful purpose for my life&quot;</td>
<td>5.00</td>
<td>3.52</td>
<td></td>
<td>p=.1487</td>
</tr>
<tr>
<td>#28 &quot;My life is in my own hands &amp; I am in control of it&quot;</td>
<td>2.00</td>
<td>3.58</td>
<td></td>
<td>p=.1505</td>
</tr>
<tr>
<td>#7 &quot;I believe a pleasant afterlife will follow my death&quot;</td>
<td>5.00</td>
<td>3.29</td>
<td></td>
<td>p=.0993</td>
</tr>
<tr>
<td>#8 &quot;I view my death as a relief from earthly suffering&quot;</td>
<td>5.00</td>
<td>2.32</td>
<td></td>
<td>p=.0809</td>
</tr>
<tr>
<td>#9 &quot;I would rather avoid thinking about the topic of my own death&quot;</td>
<td>1.00</td>
<td>2.61</td>
<td></td>
<td>p=.1006</td>
</tr>
<tr>
<td>#12 &quot;I find the topic of my death to be depressing&quot;</td>
<td>1.00</td>
<td>2.61</td>
<td></td>
<td>p=.1540</td>
</tr>
<tr>
<td>#13 &quot;The thought of my own death frightens me&quot;</td>
<td>1.00</td>
<td>2.49</td>
<td></td>
<td>p=.1783</td>
</tr>
<tr>
<td>#31-32 Threat Index: TI-25</td>
<td>3.0</td>
<td>10.0</td>
<td></td>
<td>p=.423</td>
</tr>
<tr>
<td>TI-7</td>
<td>1.0</td>
<td>2.8</td>
<td></td>
<td>p=.490</td>
</tr>
</tbody>
</table>

' indicates statistical trend (0.05 ≤ p ≥ 0.10), but not significance.

(Note: mean group scores have been provided for interest sake only; the Mann-Whitney test is based on rankings)

The lack of other NDErs in this sample made it impossible for the life and death attitude differences between the NDEr and non-NDErs to reach statistical significance. It is possible, but by no means certain, that additional, similarly-responding NDErs in the sample would have made some of the differences, noted in Table 26, significant.

As Table 27 shows, t-tests indicated that those who knew an NDEr (n=13) displayed significantly different responses, than those who did not know an NDEr, including the following: (1) more discovered life purpose (question #26); (2) more neutral acceptance of their own deaths (#10); (3) less anger over own mortality (#11); (4) less tendency to find the topic of their own death depressing (#12); (5) less fear over the thought of their own deaths (#13); (6) lower degrees of certain specific fears of their own deaths (including on survey questions #14, 15, 18, 23, and 24).

As well, nonsignificant trends indicate that those who knew an NDEr showed: (7) more approach acceptance (#7), and; (8) more escape acceptance (#8) of death. No other life or death attitudes were statistically different.

Table 27: Life & death attitude differences: those who know an NDEr versus those who don't

<table>
<thead>
<tr>
<th>Survey Question/Attitude</th>
<th>X_known-NDEr</th>
<th>X_don't know NDEr</th>
<th>T-test Signif.</th>
</tr>
</thead>
<tbody>
<tr>
<td>#26 &quot;I have discovered a meaningful purpose for my life&quot;</td>
<td>4.13</td>
<td>3.41</td>
<td>p=.016 *</td>
</tr>
<tr>
<td>#7 &quot;I believe that a pleasant afterlife will follow my death&quot;</td>
<td>3.73</td>
<td>3.23</td>
<td>p=.107 '</td>
</tr>
<tr>
<td>#8 &quot;I view my death as a relief from earthly suffering&quot;</td>
<td>2.87</td>
<td>2.25</td>
<td>p=.074 '</td>
</tr>
<tr>
<td>#9 &quot;I would rather avoid thinking about the topic of my death&quot;</td>
<td>2.20</td>
<td>2.70</td>
<td>p=.136</td>
</tr>
<tr>
<td>#10 &quot;I would neither fear my death nor welcome it&quot;</td>
<td>3.93</td>
<td>3.34</td>
<td>p=.036 *</td>
</tr>
<tr>
<td>#11 &quot;The fact that I will have to die some day makes me angry&quot;</td>
<td>1.53</td>
<td>2.20</td>
<td>p=.038 *</td>
</tr>
<tr>
<td>#12 &quot;I find the topic of my death to be depressing&quot;</td>
<td>1.96</td>
<td>2.73</td>
<td>p=.023 *</td>
</tr>
<tr>
<td>#13 &quot;The thought of my own death frightens me&quot;</td>
<td>1.73</td>
<td>2.68</td>
<td>p=.008 *</td>
</tr>
<tr>
<td>#31-32 Threat index</td>
<td>- 25 item scale</td>
<td>7.83</td>
<td>10.41</td>
</tr>
<tr>
<td></td>
<td>- 7 item scale</td>
<td>2.00</td>
<td>2.90</td>
</tr>
</tbody>
</table>

* indicates statistical significance ' indicates statistical trend (0.05 ≤ p ≥ 0.10), but not significance.
Third, in attempting to address the relationship between NDE knowledge and death attitudes, the three groups of NDE knowledge scores (low, medium, and high) established previously were compared with all death attitude questions, and with life attitude questions, by means of a parametric ANOVA with Duncan tests. Results are shown in Table 28.

**Table 28: Low, Medium, & High NDE Knowledge Groups & Life & death attitudes**

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>(X_{\text{Low}})</th>
<th>(X_{\text{Medium}})</th>
<th>(X_{\text{High}})</th>
<th>Test</th>
<th>Signif.</th>
</tr>
</thead>
<tbody>
<tr>
<td>#30 &quot;I feel I have a future purpose to fulfill&quot;</td>
<td>3.09</td>
<td>3.63</td>
<td>3.95</td>
<td>ANOVA + Duncan</td>
<td>(p&lt;.05) *</td>
</tr>
<tr>
<td>#7 Approach acceptance of death</td>
<td>2.96</td>
<td>3.33</td>
<td>3.63</td>
<td>ANOVA + Duncan</td>
<td>(p&lt;.05) *</td>
</tr>
<tr>
<td>#8 Escape acceptance of death</td>
<td>1.95</td>
<td>2.62</td>
<td></td>
<td>(t)-test (high vs. low)</td>
<td>(p=.095)*</td>
</tr>
</tbody>
</table>

*indicates statistical significance

These tests revealed that: (1) both the high and the medium NDE knowledge groups showed more approach acceptance than did the low NDE knowledge group; (2) the high NDE knowledge group indicated significantly more "future purpose to fulfill" than did the medium or the low NDE knowledge group. As well, a \(t\)-test detected the fact that the high NDE knowledge group showed significantly more escape acceptance than did the low NDE knowledge group. No other significant differences were found between those individuals with high NDE knowledge scale scores and those with medium or low NDE knowledge scale scores, with respect to life and death attitudes.

T-tests were conducted comparing low and high NDE knowledge groups' Likert responses to survey question #37, parts a through q (no table given). While responses differed significantly between these two groups for a majority of parts to question #37, the principal finding is that even those with high NDE knowledge, *on average*, expressed uncertainty (i.e., a mean Likert score of about 3) as to whether NDE information had caused these life and death attitude changes to occur at all. Those who were more knowledgeable about NDEs did not claim to have been affected by them any more than those who were less knowledgeable.

**Summary**

In summarizing the findings on whether having more NDE knowledge is associated with a distinctive pattern of death attitudes and/or life attitudes, several points can be made.

First, ANOVA with Duncan tests between high, medium, and low NDE knowledge groups generally confirmed what the corresponding correlations had suggested: namely that, for this sample, higher levels of NDE knowledge scale scores were associated with: more approach...
acceptance of death; more escape acceptance of death; and also with a stronger belief that one has a future purpose to fulfil. Respondents in the high NDE knowledge group also indicated being significantly more strongly affected by NDE information in a variety of life-enhancing ways, than were respondents in the medium and low NDE knowledge groups.

Second, knowledge about NDEs gained through personally knowing an NDEr, or through actually having an NDE, may have been particularly effective in altering life and death attitudes. Those 15 respondents who knew an NDEr, had significantly more positive life attitudes and, especially, death attitudes than did those who did not know any NDErs. In comparison with the remainder of the sample, these 15 respondents generally reported more life purpose and sense of control over their own lives. They also indicated less (general and specific) fear, and less anger and depression regarding their own deaths, as well as less desire to avoid the topic. In terms of Wong et al.'s typology of death acceptance, these individuals had higher levels of: (1) Approach acceptance (accept own death because it will mean a happy afterlife); (2) Neutral acceptance (accept death as part of nature, and so would neither fear nor welcome death), and; (3) Escape acceptance (accept death because it represents a relief from earthly suffering), than did the sample in general. Also, respondents who know an NDEr showed less death threat, yet this was not significantly different.

Compared with the rest of the sample (of nonNDErs), the one individual who claimed to have personally had an NDE displayed nonsignificant trends toward: (1) more approach acceptance of death; (2) more escape acceptance of death, and; (3) less avoidance of the topic of death. It is possible, but by no means certain, that, given a larger number of actual NDErs, more positive life and death attitudes (such as those of the 15 respondents who knew an NDEr) may have been evident (i.e., statistically significant) in the NDEr group as well. Such findings would be in line with those of Greyson (1994), who found a number of very positive life and death attitudes in self-reported NDErs.

**NDE attitudes: Their relationship to life & death attitudes**

First, in addressing this research question, scores from the first NDE attitude factor and the 20 individual NDE attitude questions were compared, via Pearson correlations, to each life attitude and death attitude question, including the Threat Index. Table 29 shows notable results.
With respect to life attitudes, the first NDE attitude factor, positiveness toward NDEs, was found to correlate significantly (and positively) with both life purpose (question #26) and future purpose to fulfill (#30). In terms of death attitudes, this factor correlated positively with approach acceptance (#7) and negatively (though not significantly) with depression over death. No other significant correlations were found between "Positiveness toward NDEs" factor scores and any other life or death attitude question.

Data from the second NDE attitude factor were positively skewed (i.e. skewed to the right) due to a large percentage of extreme scores. Therefore use of a nonparametric (rank) correlation was necessary when comparing these scores to those of life and death attitude questions. Kendalls' Tau correlation coefficient was chosen over the Spearman correlation as significance-testing procedures are more precise for Kendall's statistic (McCall, 1986, p.343).

As is evident in Table 30, the second NDE attitude factor, fear of NDEs, was found to correlate significantly (and negatively) with life purpose (question #26). The correlation with internal locus of control (#28) \( (r = -0.1588, p = 0.114) \) approached significance. These findings suggest that, for respondents in this sample, a greater sense of life purpose and control over one's life was associated with less fear of NDEs.

With respect to death attitudes, the fear of NDEs factor was also found to be correlated with: death avoidance (#9); neutral acceptance of one's own death (#10); anger over own mortality (#12): depressing feelings regarding death (#12), and with; fear of own death (#13). These results are also depicted in Table 30.

### Table 29: significant correlations between positiveness toward NDEs and life & death attitudes

<table>
<thead>
<tr>
<th>Question / Attitude</th>
<th>Pearson Correlation</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td># 26 &quot;I have discovered a meaningful purpose for my life&quot;</td>
<td>( r = 0.2574 )</td>
<td>( p = 0.030 ) *</td>
</tr>
<tr>
<td># 30 &quot;I feel I have a future purpose to fulfil&quot;</td>
<td>( r = 0.3324 )</td>
<td>( p = 0.007 ) *</td>
</tr>
<tr>
<td># 7  &quot;I believe that a pleasant afterlife will follow my death&quot;</td>
<td>( r = 0.4183 )</td>
<td>( p = 0.000 ) *</td>
</tr>
<tr>
<td># 12 &quot;I find the topic of my death to be depressing&quot;</td>
<td>( r = -0.1918 )</td>
<td>( p = 0.099 )</td>
</tr>
</tbody>
</table>

* indicates statistical significance  
\( 1 \) indicates statistical trend (0.05 \( \leq p \leq 0.1 \), but not significance.

### Table 30: noteworthy correlations between Fear of NDEs and life & death attitudes

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Spearman Correlation</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( 1 \) indicates statistical trend (0.05 \( \leq p \leq 0.1 \), but not significance.
Second. the sample was divided into three equally numbered groups of those with low, medium, and high "positiveness toward NDEs", based on respondents' scores on the 17 questions comprising this first NDE factor. As with the NDE knowledge groups, these "positiveness toward NDEs" groups were created by using the 33 and 66 percentile factor scores as markers to divide them. This resulted in nearly equal groups of 24, 23, and 24 for high, medium, and low positiveness toward NDEs, respectively. The three groups of NDE belief factor scores (low, medium, and high belief) were compared across each life and death attitude question, including the Threat Index, by appropriate statistical analysis. Significant results are shown in Table 31.

Table 31: low, medium, & high positiveness toward NDEs and life and death attitudes

<table>
<thead>
<tr>
<th>Attitude</th>
<th>XLow</th>
<th>XMedium XHigh</th>
<th>Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>#26 &quot;I have discovered a meaningful purpose for my life&quot;</td>
<td>3.33</td>
<td>3.79</td>
<td>t-test</td>
<td>p=.124</td>
</tr>
<tr>
<td>#30 &quot;I feel I have a future purpose to fulfil&quot;</td>
<td>3.09</td>
<td>3.63</td>
<td>3.95</td>
<td>ANOVA + Duncan</td>
</tr>
<tr>
<td>#7 &quot;I believe that a happy afterlife will follow my death&quot;</td>
<td>2.75</td>
<td>3.52</td>
<td>3.70</td>
<td>ANOVA + Duncan</td>
</tr>
<tr>
<td>#9 &quot;I would rather avoid thinking about my own death&quot;</td>
<td>2.25</td>
<td>2.71</td>
<td>t-test</td>
<td>p=.155</td>
</tr>
<tr>
<td>Threat Index</td>
<td>- 25 item scale</td>
<td>6.47</td>
<td>11.81</td>
<td>t-test</td>
</tr>
<tr>
<td></td>
<td>- 7 item scale</td>
<td>1.81</td>
<td>3.27</td>
<td>t-test</td>
</tr>
</tbody>
</table>

*indicates statistical significance

Table 31 exhibits the fact that there were significant differences between the three "Positiveness toward NDEs" groups for future purpose to fulfil (#30), and for approach acceptance of death (#7). The group displaying high positiveness toward NDEs also indicated more discovered life purpose (#26) than their low positiveness toward NDEs counterparts. This difference approached statistical trend status.

T-test analysis of scores from both the 25 item, and the seven item Threat Index revealed that the high positiveness toward NDEs group indicated significantly more death threat than the low
positiveness toward NDEs group. This result was the opposite of what was expected.

The extent of positive skew in the responses to the three questions comprising the fear of NDEs factor rendered useless any notion of making comparisons between low, medium, and high fear of NDEs groups, since the means, and even ranks, of such groups were virtually identical (due to the high number of fours and fives in the Likert responses to these questions).

Third, as an additional means of addressing this research question, individuals were divided into three groups based on their responses to survey question #90, where respondents selected one of nine explanations they felt best explained the NDE vignette provided. The three groups were as follows: group 1, individuals who selected option 5 - the NDE vignette was "possible evidence for life after death" (n=35); group 2, those who chose option 8 - "I don't know how to explain" the NDE vignette (n=25); and group 3, those who chose any of the other responses, all of which clearly question the objective validity of the NDE in the vignette (n=12). Groups two and three were each, in turn, compared with the first group with respect to their mean scores on death attitude and life attitude questions, via t-tests. Significant findings are depicted in Table 32.

### Table 32: explanation for NDE vignette and life & death attitudes

<table>
<thead>
<tr>
<th>Attitude</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>Test</th>
<th>P1 vs. 2</th>
<th>P1 vs. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>#26 &quot;I have discovered a meaningful purpose for my life&quot;</td>
<td>3.69</td>
<td>3.52</td>
<td>3.08</td>
<td>t-test</td>
<td>n.s.</td>
<td>p=.083 †</td>
</tr>
<tr>
<td>#30 &quot;I feel I have a future purpose to fulfill&quot;</td>
<td>3.89</td>
<td>3.40</td>
<td>2.75</td>
<td>t-test</td>
<td>p=.041*</td>
<td>p=.000 *</td>
</tr>
<tr>
<td># 7 &quot;I believe that a pleasant afterlife will follow my death&quot;</td>
<td>3.69</td>
<td>3.04</td>
<td>2.75</td>
<td>t-test</td>
<td>p=.117</td>
<td>p=.001 *</td>
</tr>
<tr>
<td># 9 &quot;I would rather avoid thinking about my own death&quot;</td>
<td>2.40</td>
<td>2.87</td>
<td>2.67</td>
<td>t-test</td>
<td>p=.019 *</td>
<td>n.s.</td>
</tr>
<tr>
<td>#10 &quot;I would neither fear my death nor welcome it&quot;</td>
<td>3.60</td>
<td>3.48</td>
<td>3.00</td>
<td>t-test</td>
<td>n.s.</td>
<td>p=.084 †</td>
</tr>
</tbody>
</table>

* indicates statistical significance  
 n.s. = t-test did not approach significance

The t-tests depicted in Table 32 indicate that those who felt the best explanation of the NDE vignette provided was that it "was possible evidence for life after death" (group X-1 in Table 32) displayed significantly higher scores than either of the other two groupings for: (1) future purpose to fulfill (question #30). In addition, group one members showed significantly less (2) death avoidance (#9) than those who "didn't know how to explain" the vignette. Group one members also had discovered (3) a greater degree of meaningful purpose for their lives (#26), more (4) Approach
acceptance (#7), and more neutral acceptance of their own deaths (#10) than did those who chose an explanation which questioned the objective validity of the NDE in the vignette. No other life or death attitude question displayed significance between these groups.

Summary

In summarizing the findings on whether having a more positive attitude toward NDEs is associated with a distinctive pattern of death attitudes and/or life attitudes, it appears that, in several ways, it is. Analysis of high versus medium, and low positiveness toward NDEs groups confirmed what correlations had suggested: namely, that a more positive attitude toward NDEs (comprised of more interest, and belief in NDEs, as well as ascribing more importance to NDEs) appears to be associated with: (1) stronger convictions that one has a future purpose to fulfil; (2) more meaningful purpose for one's life; (3) more approach acceptance of one's own death (i.e. a stronger belief that a pleasant afterlife will follow one's death); (4) [surprisingly] more "death threat" posed by one's own death; (5) less of a tendency to find the topic of one's own death to be depressing, and possibly; (6) less of a desire to avoid the topic of one's own death.

The fear of NDEs factor was found to have many correlations with life and death attitudes which were corollary to those displayed by the positiveness toward NDEs factor. In fact, fear of NDEs was associated with: (1) less meaningful purpose for one's life; (2) more of a tendency to find the topic of one's own death to be depressing; (3) more of a desire to avoid the topic of one's own death; (4) more neutral acceptance of one's own death (would neither fear nor welcome death); (5) more anger over one's own mortality; and (6) more fear (both general & specific fears) regarding one's own death.

Summary of Results Chapter

The demographic characteristics of the 73 respondents in this sample suggest that they are well-educated, and age and gender-diverse. Despite the relatively low sample size, The 61 percent response rate is high enough - and the wide range of expressed attitudes is varied enough - to suggest that this sample might not be overly unusual in any manner. However, the low percentage of respondents claiming non-Judeo-Christian religious affiliation limits our ability to, with
confidence, generalize these findings to the general Canadian (or at least the Toronto) community.

While almost all respondents had heard of NDEs, certain respondents seemed to know more about them than others. This knowledgeable group included those with "personal" understanding of NDEs (via having had one or knowing such a person). These respondents also tended to hold more positive attitudes concerning NDEs.

Respondents, while quite positive on average, displayed a range of attitudes toward NDEs. Approximately half of the sample (3 out of every 6 respondents) believed that NDEs were evidence for life after death, while one-third (2 out of every 6 respondents) were uncertain. Only one-sixth of respondents expressed a clear rejection of this theory. Few respondents in this sample indicated any fear of NDEs.

A significant majority of about two-thirds of the sample believed that NDE information may be helpful to those dealing with death and a similar majority felt that health care workers should be prepared to discuss NDEs with patients. Believers in the objective validity of NDEs were more strongly supportive of the above two prospects. These believers were also more likely to indicate acceptance of death as a pleasant continued existence.

Overall, this sample held generally positive views of life and death. Relatively high approach acceptance, and neutral acceptance of death existed among generally low escape acceptance, death avoidance, fear; anger; and depression concerning their own deaths.

Those who knew more about NDEs also appeared to view them more positively than those who knew little. However, it could not be determined which, if any, had "caused" the other. More NDE-knowledgeable respondents may also have indicated somewhat more positive life and death attitude profiles, although some factors, such as the Threat Indices, failed to show any differences based on knowledge. Analysis of the Threat Indices did, however, exhibit an unanticipated result: significantly more Death Threat for the high (versus the low) Positiveness toward NDE group.

The next chapter consists of a discussion of the results obtained in this study, with reference to research-question hypotheses outlined at the conclusion of the literature review. This discussion employs the theoretical perspective of this thesis to attempt to interpret the apparent answers to these research questions, in light of both the data obtained here, and through other research and scholarship. Tentative conclusions are drawn where appropriate.
DISCUSSION and CONCLUSIONS

The objectives of this study were: (1) to describe this sample's knowledge and attitudes concerning NDEs; (2) to attempt to determine whether NDE knowledge was related to NDE attitudes, and; (3) to determine whether knowledge of and attitudes toward NDEs were related to attitudes toward life and death.

The expectation of these findings is not that we will be able to identify, definitively, the precise impact of NDE material on life and death attitudes in North American society. Rather, it is that we might be able to add to a dialogue on this topic: a topic with relevance to our deeply held beliefs about the meaning of life and death.

In this chapter the results of this research (conducted in 1994) are discussed and conclusions are drawn. These findings have been discussed within the context of other scholarship on each respective topic in an attempt to formulate thorough answers to the research questions posed at the end of the literature review chapter.

The first section of this chapter discusses key characteristics of this sample. This is done in order to better understand how these respondents are similar to and different from both the community from which they were drawn, and samples from other studies. The second section of this chapter discusses what this sample knew, thought, and felt about NDEs, the knowledge and attitudes they displayed. The third section of this chapter investigates the relationship between NDE knowledge and NDE attitudes. The fourth section addresses the question of whether life and death attitudes are affected by information on NDEs. The fifth section suggests some ideas about the potential impact of NDE information on North American society. Finally, the last section outlines the limitations to this study's findings.

The sample

The sample size of 73 attained here, while relatively small by survey standards, is adequate for statistical analyses (McCall, 1986). The sample is unexpectedly, slightly more weighted with females (42) than males (29). The response rate of 61 percent is fairly healthy and is higher than for other studies concerning NDE knowledge and attitudes.

The sample is diverse in terms of age (20-82 years, mean of 40). However it appears less diverse
with respect to religious affiliation, as 59 percent of respondents are Christian, and only 7 percent profess non-Judeo-Christian affiliation. While this sample may not be dissimilar to the Canadian population (over 75% of whom indicated Christian affiliation in 1995: Bibby, cited in The Globe and Mail, Nov. 2, 1996), it seems less heterogeneous than a 'typical' Toronto sampling would produce.

Fifty-eight percent (58%) of the sample expressed belief in some form of life after death, while a further 25 percent were undecided. This is not unlike the approximately 70% of Canadians who report a belief in some form of life after death (Bibby, 1995; Gallup, 1982).

The sample is generally well-educated. The fact that 94 percent had completed high school and that 60 percent had completed at least a university bachelor's degree indicates that these respondents are better educated than the average Canadian (less than 20% of Canadian adults had obtained university degrees as of 1995: Bibby, 1995).

Overall, it is difficult to estimate the extent to which this sample is representative of the adult Canadian or Toronto communities. The adequate response rate, the diversity of expressed NDE knowledge and attitudes, and the age diversity of this sample are encouraging. However, the skewed gender and education levels and, perhaps, the limited religious diversity and sample size lead to concerns regarding the extent to which these findings may be generalized to the wider community. At minimum, significant caution should be taken in doing so.

**NDEs: what do people know and think about them?**

This section discusses the results of research questions one and two. Each of these questions will be addressed sequentially.

**NDEs: what do people know about them?**

Research question one inquires as to the NDE knowledge displayed by this sample. The term "NDE knowledge" has been clarified in the literature review. As it is used in this study, NDE knowledge refers to an individual's familiarity with any and all common aspects of NDE phenomena as they have been discussed in the lay and professional literature and media. This includes issues of explanation, elements or stages, correlates, and aftereffects.

A determination of the NDE knowledge of respondents in this study was calculated based on
several methods. The principal mechanism for determining NDE knowledge was the revised Thornburg NDE Knowledge Scale developed for this study and outlined in Appendix C (for an explanation of the scale's development, see the Methods section). In addition, other survey questions were included to establish a more complete understanding of NDE knowledge. Data from these questions informed us as to whether the respondent had: heard of NDEs; had an NDE, and; knew anyone who'd had an NDE. Other data informed us about respondents' sources of NDE information.

The fact that an overwhelming majority (90%) of respondents in this study had heard of NDEs is a testimony to the ongoing, and perhaps increasing, appearance of the topic of NDEs, especially in the lay media and literature. Previous studies in the 1980's indicated somewhat less familiarity among health care professionals (roughly 70% familiarity, with comparable response rates). We can be quite confident that respondents did not misinterpret the term Near-Death Experience since a general definition was provided before the NDE knowledge questions were posed. This definition should not have provided the respondent with information extensive enough to have altered his or her answers to any subsequent questions.

Although only one of the 73 respondents indicated that he had had an NDE, there were three others who indicated they were not certain whether they had or not. It is impossible to discern why these individuals chose this response. However, it may have had to do with their uncertainty over whether their own 'experiences', whatever they may have been, occurred near to death or not, and thus whether or not they were classifiable as NDEs. What can be said is that between one and four respondents (1-5% of the sample) may have had NDE-like experiences. This is somewhat less than found in other studies investigating NDE knowledge. However, in many of these other studies, the response rates are notably lower than here and so their higher percentage of NDErs may simply reflect the greater likelihood of NDErs to participate in such studies, rather than a real difference in NDE frequency in the populations researched.

The twenty-one per cent (21%) of respondents in this study claiming to know an NDER personally is somewhat lower than in other studies assessing NDE knowledge. However, as outlined above, this may have to do with the higher response rate in this study as compared to those conducted previously. The 21 percent figure is more supportive of Gallup and Proctor's (1982) suggestion that over eight million (North) Americans have experienced NDE-like events, than is the low percentage (1-5%) of NDErs found in this study.

The fact that more respondents had received information on NDEs from the audiovisual and/or print media than from any other source was not surprising: Hayes and coworkers (1989, 1990) and Kellehear and colleagues (1989, 1990) had also found this to be true. It is noteworthy that only a very small minority of respondents, in this and other studies, had obtained information on this topic from health care professionals.
When, in an open ended question, respondents were asked to list as many aspects about NDEs as possible, only half the sample chose to respond. Those who did so described an average of three or fewer elements of the 15 common NDE elements identified by Raymond Moody (1975). This poor result is similar to that of other studies attempting to use this method as a means to assess NDE knowledge (Bechtel et al., 1992; Walker and Russell, 1989). However, given the low response rate to this question (44 of 73 respondents), and given the poor NDE knowledge indicated, data from this question did not play a role in further analysis of this sample.

The average score on the NDE knowledge scale was 6 out of 15, indicating a low to moderate level of understanding of Near-Death Experiences. This average is very similar to that found in other studies using (often modified versions of) Thornburg's NDE knowledge scale (Bechtel et al., 1992; Moore, 1994; Walker and Russell, 1989), and was similar to the "moderate amount of knowledge" hypothesized for this sample.

It is noteworthy that this sample was quite unknowledgeable about "unpleasant" NDEs, as evidenced by the fact that only 10-14% of respondents correctly answered survey questions #62 through 66 (these questions were, therefore, removed from the NDE knowledge scale used to evaluate this particular sample). This lack of knowledge regarding unpleasant NDEs may be due to the fact that "negative" NDE accounts have been far less frequently discussed, to date, in the popular literature and in the media. Indeed, no studies to date have assessed knowledge of unpleasant NDEs. These results should not discourage such assessment in future research.

For this sample, those variables which correlated significantly and positively with the NDE knowledge scale were similar to other studies and included: (1) having experienced an NDE; (2) knowing an NDEr. and: (3) believing in life after death. In addition, nonsignificant trends indicate that a higher degree of NDE knowledge could possibly be associated with: (4) relatively fewer years of formal schooling, and: (5) younger ages.

The higher NDE knowledge of NDErs and also of respondents who know NDErs concurred with previous research (Bechtel et al., 1992) and confirmed our hypothesis. However, it is difficult to tell whether this increased knowledge came as a result of information acquired from personal contact with an NDEr. or as a result of a heightened motivation to pursue information on NDEs. While some scholars have argued for the former hypothesis (Ring, 1992, 1995), it seems reasonable that both factors would have played a part in this process.

The significantly higher NDE knowledge displayed by those who believe in life after death also confirmed our hypothesis. It may well be that such individuals are more motivated to seek out. or to
otherwise watch, read, or listen to NDE material that they encounter. Perhaps this is because such material supports their existing constructs of life and death and, therefore, reassures them that the meaning they have ascribed to these concepts is valid.

The trend toward more NDE knowledge for those with relatively less education was similar to, though somewhat stronger than, that of Bechtel and colleagues' sample of clergy (1992). This finding is somewhat contrary to our hypothesis of no significant differences based on education level. It is difficult to explain, with any certainty, why those with relatively less education would know more about NDEs. Perhaps it is because more educated respondents had a higher degree of skepticism regarding the possibility of life after death and/or the validity of NDEs and so were less open to NDE material that they had encountered. This theory would be consistent with the notion that more educated individuals had accepted the prevailing academic - or at least scientific - perspective of materialism to a greater extent than had their less well-educated counterparts.

The trend toward more NDE knowledge for those who are relatively younger replicated the "tendency" reported by Hayes and Waters (1989) in their sample of nurses. This trend, though expected to be statistically significant, confirmed our hypothesis to a great extent. It is impossible to state, however, why younger adults tend to know more about NDEs. We identified, in the hypothesis section of the literature review, the possibility that younger persons would be more open to NDE information since their relative lack of religious belief would create an existential vacuum (Reker and Peacock, 1981) which would need to be filled by something that could help them find meaning and purpose for their lives: perhaps NDE material is part of that 'something'? Another possibility, as Kellehear (1996) has outlined, is that younger people tend to have more exposure to the audiovisual media, where much of the recent promotion of NDEs has occurred. The first theory suggests that younger people, for whatever reason, are more motivated to pursue NDE material. The second theory suggests that younger people may simply encounter NDE material more, based on their lifestyle. Either or both of these theories may be correct, and both should be examined in future research.

In summary, most respondents in this sample displayed familiarity, yet only superficial knowledge of the information available on Near-Death Experiences. The print and audiovisual media was, by far, the most frequent source of information concerning NDEs. Those individuals who knew more about NDEs were often those who had some personal experience with them (claimed to be an NDER or to know an NDER), and those who believed in life after death. In addition, there were trends toward more NDE knowledge among those with less formal education, and those who were younger.

All of the findings regarding NDE knowledge are consistent with, although do not prove, the theory
that people interpret NDE material in a way that may confirm and strengthen, but does not change, their own current personal constructs (i.e., meanings) of life and death. This perspective accounts for the fact that some may be motivated to pursue and/or to be open to NDE material, while others may dismiss NDE material as untrue and/or unimportant.

NDEs: what do people think about them?

Research question two inquires as to the NDE attitudes displayed by this sample. The term "NDE attitudes" has been clarified in the literature review. As it is used in this study, NDE attitudes refer to an individual's cognitions (ideas and beliefs) and emotions regarding NDE phenomena as they have been discussed in the lay and professional literature and media. This includes issues of belief, interest, importance, and fear.

Scores from the NDE Attitude Index indicate a slightly positive attitude towards NDEs, with a mean Likert scale score of 3.35 on a scale from 1 to 5. The generally positive attitudes are slightly lower than several other studies with lower response rates (Barnett, 1991; Moore, 1994; Walker and Russell, 1989), although comparison is difficult since different scales were used in these studies. Generally, though, the results of this study confirm our hypothesized NDE attitudes.

Fear of NDEs has never been measured in the research before. For this sample, NDE Attitude Index scores indicate a low fear of NDEs with a mean Likert scale score of 1.96 on a scale from 1 to 5. The results were extremely skewed, with almost no respondents expressing fear of NDEs. This is level of fear is considerably lower than was hypothesized for this sample. It is possible that this lack of fear stems from a combination of a lack of exposure to negative NDE accounts, and either an acceptance of only the positive attributes of pleasant NDE accounts (for believers in their objective validity), or a dismissal of the phenomena (for nonbelievers).

More than two-thirds of respondents agreed or strongly agreed that nurses, physicians, and social workers should be "prepared to discuss NDEs with patients who want to discuss the topic." More than four-fifths of respondents felt that clergy and psychiatrists/psychologists should be likewise prepared. These findings provide support from the community that NDE material should be incorporated into the training programs for health care professionals. This suggestion has been made by other researchers who have studied the NDE knowledge and attitudes of health care workers (Barnett, 1991; Bechtel et al., 1992; Hayes and Orme, 1990; Walker and Russell, 1989) and by others in the field of NDE studies (Callanan and Kelly,
1992; Kason and Degler, 1994). It is interesting that a majority of the respondents in this study, few of whom were health care professionals (unlike previous studies of NDE knowledge and attitudes), also feel this way. Since a significant majority of the non-health care workers in this study feel that such professionals should know about NDEs, a strong recommendation is reiterated that health care and related counseling professionals receive instruction on NDEs as a matter of their professional training and development.

Approximately 60 percent of respondents agreed or strongly agreed that NDE material may be helpful to those who are approaching and/or are fearful of death, and to families dealing with the impending or past death of a loved one. Since this figure is higher than the 49 percent who believe NDEs are evidence of life after death, it appears that some of those who were not convinced of the objective validity of NDEs are, nonetheless, open to the possibility that they may positively influence others.

Results from survey question #90 reveal several distinct perspectives. The percentage of those who believe that NDEs represent evidence for life after death (49% of this sample) was similar to Kellehear and Heaven's (1989) Australian sample (58%).

In this study, these “NDE believers” had significantly more positive attitudes regarding whether NDEs would be helpful to those dealing with death and whether health care workers should know about NDEs than did those who selected an option which either doubted NDEs as such evidence (16% of sample), or those who were not certain how to explain NDEs (35% of sample). These findings are consistent with the original hypothesis that those who display more positive attitudes toward NDEs, such as those who believe in their objective validity, will also be more optimistic regarding the potential of NDEs to positively affect others as well as regarding their importance in the training of health care professionals.

Despite the varied attitudes toward NDEs displayed by this sample, respondents' perceived comfort level in discussing NDEs is consistently high. The fact that a majority of the sample agreed or strongly agreed that they would be comfortable discussing NDEs with various health care professionals suggests that many respondents might personally engage in a discussion about NDEs with one or more of these professionals, should such a discussion be initiated by either party. The finding that approximately 90 percent of respondents expressed comfort in discussing NDEs with friends and family members might ease concerns of both the dying and their loved ones over introducing NDEs as a topic of discussion.

Respondents who, on open-ended survey question 68, claimed that NDEs had affected them (41% of this sample) typically wrote that NDE material had reduced their fear of death through strengthening their belief in life after death. It is noteworthy that no respondents claimed that NDE material had changed their attitudes regarding life or death. This is consistent with our hypothesis of the potential construct-
solidifying effect of NDE material (as opposed to a construct changing - or deconstructing - effect).

On survey question 37, approximately half of respondents indicated that they disagreed or strongly disagreed that what they had learned about NDEs had affected their attitudes towards life and death, including their feeling of existential purpose, and the meaning of life or death etc. Therefore, unlike the significant and positive life and death attitude changes noted in those claiming to have had NDEs (Flynn, 1982; Greyson, 1994; Noyes, 1980; Ring, 1980, pp. 143-144, and; Sabom, 1982, p. 132), the attitudes of respondents in this sample have not consistently been altered or otherwise significantly affected. However, results from many of these questions (# 37 a-q) also display that between one-quarter and one-third of respondents agree, or strongly agree, that their life and death attitudes have been strengthened in a number of ways. Generally, these ways include having assisted the respondent in attaining a more positive life and death attitude profile. Those who indicated that they believed NDEs to be evidence for life after death were statistically more likely to have been affected in these ways (often significantly so). Even for this group, however, the mean Likert response was three or less for all questions, indicating uncertainty rather than substantial impact for NDE material.

Approximately one-third of respondents agreed or strongly agreed that what they had read about NDEs had: "increased my understanding of death" (see #37.d); "reduced my fear of death" (see #37.i); "increased my belief in life after death" (see #37.j); "made my own life seem more meaningful" (see #37.e), and had: "helped me to accept the life that I have lived so far" (#37a). These results suggest that, for some respondents, especially those who believe in the objective validity of NDEs, NDE material may act to strengthen attitudes (i.e., constructs) toward life and death in a positive manner.

Approximately one-quarter of those who responded to question #37-f agreed or strongly agreed with the statement that what they have learned about NDEs has increased their belief that they are in control of their lives. This indicates that, for a minority of respondents, NDEs may increase one's locus of control, one factor which has been thought to affect death attitudes (Epstein, 1980; Breznitz, 1983). It is also noteworthy, however, that 56 percent of respondents to this question clearly indicated that NDE material had not increased their sense of self-control over their own lives.

Approximately one-quarter of those who responded to question #37-p agreed or strongly agreed with the statement that what they have learned about NDEs has helped them to deal with the death of someone close to them. This indicates that some respondents feel NDE material has already been helpful to them. Again, it is also noteworthy that 61 percent of respondents to this question clearly indicated that NDE material had not helped them in this manner, at least not up to this point in their lives.

For this sample, those variables which were significantly associated with more positiveness towards
NDEs factor were similar to other studies and included: (1) believing in life after death; (2) being female; and: (3) holding religion or spirituality to be very important.

Those who believe in life after death might be more receptive to NDE material since it may serve to confirm and support their existing constructs of life and death and, therefore, to reassure them that the meaning they have ascribed to these concepts is valid. This theory is consistent with our hypothesis and findings for this sample.

Gender was not hypothesized to be associated with NDE attitudes. In retrospect, the fact that women were more positive toward NDEs than men should have been expected, given the fact that a higher percentage of women tend to believe in life after death (Klenow and Bolin, 1989-90), and given that Bechtel et al. (1992) reported a similar finding (although Walker and Russell, 1989, did not).

The importance that one ascribes to religion or spirituality may be closely related to the strength of one's religious or spiritual convictions. Often, these convictions include the belief in life after death. Therefore, it may be that the correlation of this "variable" with positiveness toward NDEs is largely another reflection of the association between belief in life after death and positive NDE attitudes.

The failure to find significantly more positive NDE attitudes among NDErs or those who know NDErs concurred with previous research (Bechtel et al., 1992) yet disconfirmed our hypothesis. While it is conceivable that NDErs attitudes toward NDEs might not be significantly more positive than for the typical respondent, it is at least equally plausible that our sample size of only one NDER led to this lack of significant difference. For example, there were trends indicating that the one NDER, and also those who know NDErs, displayed more positive attitudes toward NDEs on several of the questions of the NDE Attitude Index designed to measure importance, interest, belief, and fear. These trends may or may not have been significant had the group sizes been larger.

While age has been shown to be negatively correlated with NDE knowledge, no significant association is evident between age and NDE attitudes. Apparently, while younger people may perhaps have more exposure to NDE material through audiovisual media etc., than older persons, this did not directly translate into more positive NDE attitudes for this sample, nor for Bechtel and colleagues (1992), nor Walker and Russell (1989).

No significant differences in NDE attitudes were found based on type of religion and, thus, we failed to confirm our hypothesis that respondents affiliated with religions proclaiming a similar conception of an afterlife as is portrayed by NDEs (i.e., those with the continued existence of selfhood after death) would hold more positive NDE attitudes. The investigation of this hypothesis was hampered by a lack of religious diversity in the sample. However, it is notable that atheists scored clearly - if not statistically
significantly - lower than any other religious group on positiveness toward NDEs: the low group size (only two atheists) may have confounded this comparison.

Although these respondents were consistently well educated, relatively less education was associated with less fear of NDEs. This may be related to the fact that those with less education tended to know somewhat more about NDEs and, therefore, may experience even less anxiety of this sort than do others who are not so well-informed about them.

Both those who did believe and those who did not believe in life after death displayed significantly higher fear of NDEs than did those who were undecided. This data supports evidence of a parabolic relationship between religiosity (or, at least belief in life after death) and fear of death (or, at least, fear of NDEs). This relationship suggests that those who are truly undecided or ambivalent with respect to religious or spiritual beliefs fear death, and apparently fear NDEs, significantly less than do either the very religious or the non-religious. This finding is consistent with other research (Neimeyer, 1994).

Other than comparisons based on religious affiliation, no other attempt was made to compare cultural differences with respect to NDE knowledge and attitudes nor life and death attitudes. Since this study dealt with a Canadian community sample, any attempt to compare truly distinct 'cultures' would have been problematic to begin with. Despite this fact, Kellehear reminds us that the appeal for NDE material is dependent upon the social context (1996, p. 5). Whether discussing the poorer NDE knowledge and attitudes of Kellehear and coworkers' (1990) Chinese (as compared to their Australian) sample or an arguably less receptive Western public 40 years ago, culture must be regarded as an important influence through which we receive and interpret NDE material.

In summary, most respondent's in this sample displayed either benign, or else positive attitudes toward Near-Death Experiences. Those individuals who felt more positively about NDEs were females, those who believed in life after death, and those who were more religious or spiritual.

All of the findings regarding NDE attitudes are consistent with, although do not prove, the theory that people interpret NDE material in a way that may confirm and strengthen, but does not radically change, their own current personal constructs (i.e., meanings) of life and death. This perspective accounts for the fact that some, such as those who believe in life after death, may be more motivated to pursue and/or to be more positive toward NDE material, while others may dismiss NDE material as untrue and/or unimportant.

In the contemporary Western world, according to Kellehear (1996), NDEs and the people reporting them are most often, "received positively, albeit with great curiosity." Kellehear reminds us that, "for some time now, newspapers, television shows, and Hollywood have explored, even celebrated, this popular assortment of images near death" (p. 60). This notion of the widespread acceptance of NDEs stands in
contrast to the popular view (among many NDErs and those in NDE research) that NDErs are victims of negative attitudes and responses (p. 60). Kellehear argues that this perspective may stem from the trauma inflicted by the few negative reactions the NDEr encounters and/or by early rejection from two groups who may be less positive toward NDEs, namely: doctors, and older people such as parents (1996, p. 67-68).

With respect to explanations for NDEs, this study's 49 percent of believers and 35 percent who were uncertain is comparable to Kellehear's (1989) findings of 58 percent believers and 18 percent uncertain in his Australian study. In Kellehear's study nearly one-quarter of respondents chose explanations which represented the rejection of NDEs as valid, objective experiences of death. In this study, drawn from a similar Western cultural experience, less than one-sixth made such a rejection. But why? If we assume that this sample is culturally very similar to Kellehear's Australian sample, then perhaps this apparent reduction in negative attitudes toward NDEs over the past several years is due to continued exposure to NDE material in the audiovisual media and literature. Alternatively, it may be true that attitudes toward NDEs, life after death, and religion/spirituality are changing just as other meanings, beliefs, and values are being examined and revised (deconstructed) in light of changing circumstances (Mellor, 1993, p. 17).

It may be difficult to determine whether continued exposure to NDE material is impacting upon Western attitudes toward them and/or whether our already changing attitudes are encouraging the promotion of NDE material. Difficult as it may be to determine the answers to these questions, it seems worthwhile to try.

**NDEs: belief or knowledge - Which prompts which?**

This section discusses the results of research question four in investigating the relationship between NDE knowledge and NDE attitudes.

Since determination of both the NDE knowledge and the NDE attitudes this sample was calculated based on several methods, the investigation into the relationship between them does likewise. Both the revised Thornburg NDE Knowledge Scale, and one's "personal NDE knowledge" (i.e., whether one is an NDEr or knows an NDEr) were compared with the two NDE Attitude Index factors. As well, NDE Knowledge Scale scores were compared for those who indicated a belief in the objective validity of NDEs versus all other explanations.

Increased knowledge often correlates with more positive attitudes (Hayes and Orne, 1990, p. 79). Therefore, it was not surprising to find that NDE knowledge and NDE attitudes were correlated in this study. Indeed, this study is now the fourth (Walker & Russell, 1989; Hayes and Orne, 1990; Bechtel et al.,
to find that NDE knowledge and NDE attitudes are significantly positively correlated. The correlation found here ($r = .4226$, $p = .000$) may be considered moderately high since a correlation of .50 is frequently considered 'high' in psychological and educational research (McCall, 1986, p. 127). The moderately high correlation found here confirms our hypothesis. This positive association between NDE knowledge and attitudes is further supported by two facts: (1) that the high "positiveness toward NDEs" group attained significantly higher NDE knowledge scores than did their medium or low counterparts. and: (2) that those who best explained NDEs as "evidence for life after death" attained significantly higher NDE knowledge scores than did all other respondents combined.

The positive association between NDE "knowledge" and attitudes may also be true for those simply expressing "personal familiarity" with NDEs, including NDErs and those who know an NDER. However, a significant association could not be proven in this study, despite the obviously higher 'positiveness toward NDEs' factor scores of these groups. This failure may be attributable to the small sizes of these groups, which was regrettable. Notably, the one NDER in this sample consistently chose responses that indicated a very strong attitude of interest, importance, and belief toward NDEs. Those who know an NDER generally indicated similar, though weaker, positive NDE attitudes as compared with their counterparts who did not know an NDER. These latter respondents were very often "uncertain" in their views about NDEs.

Respondents in the high NDE knowledge group believed significantly more strongly that information on NDEs could be helpful to those dealing with the impending or past death of a loved one. However, this result may be more associated with the generally positive views that more knowledgeable respondents have toward NDEs, than it is with any real insight into the true impact NDE material may have on bereavement.

The findings of this study show that those who are more knowledgable about NDEs may also be somewhat less fearful of them, although almost all respondents displayed low fear of NDEs. This finding is indicative of the fact that positive, or "pleasant", NDE accounts are much more common in the lay press and media than are negative, or "unpleasant" ones. It would be interesting to examine the NDE attitudes of a sample who were more knowledgeable about unpleasant NDE accounts.

Causality

Given the apparent association between NDE knowledge and positive NDE attitudes, some may be tempted to conclude that learning about NDEs invariably leads to a more agreeable view of them. However such causality has not been proven. In fact, it is equally plausible, according to these findings, that
individuals who already possess a conception of death which is amenable to NDEs are more likely to pursue or more willingly receive NDE information they come across in the lay press or audiovisual media: indeed, there is data suggesting just this.

Results from survey question #36 a-d (please see table 23) seem to indicate that those who, upon initial exposure to NDE material, believed that NDEs were evidence for life after death, tended to be those who went on to learn more about NDEs, and hence became more knowledgable about them. Respondents, scoring highly on the NDE knowledge scale expressed - significantly more strongly (p<.05) than did those scoring poorly - that they believed NDEs were "evidence for life after death", right from the first time they had heard about them. Therefore, we are left to explain why one of these groups, the high NDE knowledge group, went on to learn more about NDEs than did the low knowledge group. It may well be that an individual's predisposition toward a positive attitude toward NDEs (i.e., a construct of death which includes the possibility of a continued existence of the self beyond death) may lead that person to pursue NDE material, or at least willingly receive NDE information that he or she encounters. For example, they might listen to an entire television program - or read an entire article - about NDEs instead of turning the channel or page.

Given the above, we can not conclude that acquiring NDE information or "knowledge" generally causes more positive NDE attitudes: although, we have not disproved nor discounted this possibility. This argument is consistent with our original hypothesis that NDE material is encountered and interpreted by each individual from his or her own well-established perspective on death. If this conception of death includes a similar type of afterlife as that suggested by NDEs, then this individual will be far more likely to entertain or even embrace the notion of NDEs as "possible evidence of life after death".

In summary, it seems that the belief systems of many people in the contemporary Western world may predispose them to feeling positively toward NDEs. Kellehear suggests that many of the themes NDEs represent may especially strike a chord with the educated post World War Two generations of the West including: (1) their suggestion of life after death; (2) their image of a new world based on cooperation, knowledge, and caring rather than the centralized authority of church or government, and; (3) the themes of humanism, and liberalism which have been part of our social psyche since at least the 1960's (1996, p. 77). When such people encounter material on NDEs, they may react positively toward them - as many in this study claimed they had. Given the contemporary process of deconstruction in Western society, with its reexamination of beliefs, values, and meanings (Mellor, 1993, p. 17), many individuals may be responsive to, attempt to learn more about, or otherwise support NDE material as a means of justifying their own constructions of life and death.
If those with personal constructs which include the concept of an afterlife are comparatively more motivated to acquire NDE knowledge, does this suggest that NDE material may affect life and death attitudes or not? The next section addresses this question.

**NDE Information: does it affect life and death attitudes?**

In recent decades over 1000 articles have been written on death anxiety, fear, threat, or concern (Neimeyer and Van Brunt, 1995). Despite this fact there have been no studies to date regarding the impact of NDE material on life and death attitudes of a community sample.

This section involves a discussion of the results for research question number five, which addresses whether having more NDE knowledge is associated with a distinctive pattern of life and/or death attitudes. Proper discussion of this topic will necessitate consideration of the findings regarding research question number six which investigates whether more positive NDE attitudes are associated with positive life and death attitudes.

**NDE Knowledge Scale and life attitudes**

NDE Knowledge Scale scores were hypothesized to be associated with all or most indications of positive life attitudes. Instead, these scores only correlated with the survey question corresponding to Reker and Peacock's (1981) Life Attitude Factor, "Future meaning to fulfill". The higher scores on this factor for the high NDE knowledge group as opposed to the medium and low knowledge groups confirm this relationship. This finding may suggest either that learning about NDEs increased this attitude in respondents, or that those who were already high in this factor proceeded to acquire more information about NDEs as a means of supporting their previously established constructions of life. As discussed previously, there are valid reasons (see page 146 of this thesis) for believing that the latter scenario is more likely: that those high in this factor are more receptive to NDE information.

Although respondents' perception of their "Future meaning to fulfill" was higher for those more knowledgeable about NDEs, no other of Reker and Peacock's (1981) Life Attitude Factors was significantly related to NDE knowledge: some explanation is called for.

If we remain consistent in our argument that certain individuals are more receptive to NDE information than others, and that these individuals subsequently more actively pursue NDE material and,
therefore, learn more about NDEs than those less receptive, the findings of this study make sense. An individual whose construct of life (and death) included the belief that their own life would surely be meaningful in the future would be expected to be receptive to NDE information, which essentially suggests that a meaningful life awaits that person after death.

On the other hand, there is no obvious reason why those who are high in discovered life purpose, lack of life purpose, or internal locus of control would be more receptive to - or more motivated to pursue - NDE information than others. After all, previously discovering a life purpose, or feeling a lack of life purpose, would involve one examining the life they had lived up until that point, without, necessarily, being focused on their future selves (to which NDE material pertains). Those with an internal locus of control would, theoretically, not be especially motivated to pursue NDE material either since such material does not strongly support their view that we are in absolute control of our own lives.

If we maintain that NDE information does not change life attitudes, but may strengthen established attitudes then these findings are explainable. Only those already high in Reker and Peacock's (1981) Life Attitude Factor "future meaning to fulfill" are significantly more receptive to and are more active in pursuing NDE information than average.

NDE Knowledge Scale and death attitudes

That NDE Knowledge Scale scores correlated significantly with approach-acceptance of death (belief in a happy afterlife) was hypothesized and seems rather intuitive, given that belief in NDEs as evidence for life after death was also found to be correlated with NDE Knowledge scale scores. The higher scores on this item, for the high NDE knowledge group as opposed to the medium and low knowledge groups, confirm this relationship.

NDE Knowledge Scale scores were also significantly associated with escape acceptance of death, suggesting that those who know relatively more about NDEs view their deaths as "a relief from earthly suffering" more so than others less knowledgeable about NDEs. Specifically, the higher scores on this item, for the high NDE knowledge group as opposed to the low knowledge group, support this finding.

Simply stated: those who know more about NDEs had stronger beliefs in a better life after death. But why? Did they come to believe in life after death merely through acquiring information on NDEs? Once again, evidence presented in table 23 suggests this viewpoint is unlikely (although it cannot be ruled out). It is more plausible that those respondents whose construct of death already included high levels of approach acceptance and escape acceptance were also likely to have been more receptive to NDE material.
in the past and, hence, more likely to have learned comparatively more about NDEs prior to this study. At the same time, however, it is possible that one's approach and/or escape acceptance may be strengthened by acquiring information on NDEs. Indeed, such substantiation of one's life and death constructs would, undoubtedly, encourage the pursuit - or at least the reception - of additional NDE material.

It is important to note that NDE knowledge was not associated with numerous other death attitudes. Apparently, those who indicate relatively less (or more): death threat, fear, avoidance, anger, or depression concerning death are not more motivated to pursue and/or are not more receptive to NDE material. It is not clear why this should be. Perhaps it is because fear, avoidance, anger, and depression concerning death were consistently low across all types of respondents in this study and that, therefore, differences between juxtaposing 'death construct' groups were not statistically significant. Alternatively, these findings may stem from the fact that there are a wide variety of reasons to be low (or high) in fear, avoidance, anger, and depression concerning death, many of which may not be associated with greater receptivity to NDE material. For example, someone could be completely convinced that their death would mean the complete cessation of their existence. Such a person may well experience little or no conscious fear, avoidance, anger, or depression about the situation. They may have accepted death as a natural part of life. Such a person would not be expected to be receptive to NDE material since it would not fit into their personal construct of death: hence, they may not have been motivated to acquire much information on NDEs prior to participating in this study.

In terms of death threat not being significantly related to NDE knowledge, it appears that those who are more knowledgeable about NDEs have not had their “death threat” (viewing their life and death as being different) reduced by exposure to NDE material. This finding suggests that non-NDErs are unlike NDErs in this respect, as Greyson (1994) found NDErs to have significantly less death threat than others.

Bannister and Mair (1968) have argued that death should be less threatening when the fundamental meaning of life is not affected by it. Apparently, NDErs do not see the fundamental meaning of life as being affected by death, while non-NDErs, even those knowledgeable about NDEs, may generally do so. These findings are consistent with studies which have found that belief in an afterlife has not been significantly associated with less death threat as measured by the Threat Index (Kreiger et al., 1974; Neimeyer, Dingemans, and Epting, 1977).

Whatever the reason, the fact remains that the findings of this study do not support those who suggest that NDE material may significantly reduce death threat, fear, avoidance, anger, or depression concerning death (Ring, 1995).
NDers' first hand NDE knowledge: does this affect life & death attitudes?

The positive life and death attitude profile of the NDEr in the sample is not surprising. While these particular death attitudes have not been investigated before for the NDEr population, several studies have noted the more positive death attitude profile of those claiming to have had an NDE (Flynn, 1982; Greyson, 1983; Noyes, 1980; Ring, 1980, pp. 143-144, and; Sabom, 1982, p. 132). Although statistical significance was not achieved regarding these factors, as hypothesized, this NDEr expresses noticeably more life purpose and approach acceptance of death, and noticeably less escape acceptance of death, less death threat, and less death avoidance, depression over, and fear of death. This is despite indicating a lower locus of control than other respondents.

As mentioned previously, the low number of NDErs (n = 1) makes statistical comparison between NDErs and non-NDErs difficult. However, the extreme responses of this NDEr support Greyson's (1994) findings that NDErs display significantly reduced death threat. These responses also support those who have argued that NDErs display dramatically more positive life and death attitudes than others (Flynn, 1982; Greyson, 1983; Noyes, 1980; Ring, 1980, pp. 143-144, and; Sabom. 1982, p. 132). Apparently a radical transformation may take place in ones' personal constructs of life and death, particularly when one has a “deep” NDE, experiencing many of Ring’s (1982) and Moody’s (1976) stages (Dr. Yvonne Kason, Nov. 1999, personal communication). Why such a transformation may occur is beyond the scope of this study: see Greyson (1994) and Ring (1995) for a discussion. Again, such a radical transformation does not appear to take place in ones' personal constructs of life and death when one merely reads or hears about NDEs. But what about when individuals come into contact with NDErs?

Knowing an NDEr: does this affect life & death attitudes?

Ring (1995) has claimed, as early as 1982, that individuals who are merely exposed to NDE information develop a diminished fear of death, particularly when direct contact is made with a near-death experincer.
In line with our initial hypothesis, those 15 respondents who know an NDEr also display positive life attitude and death attitude profiles. As with the actual NDEr, these respondents indicated more life purpose and more approach acceptance of death, as well as less escape acceptance of death, less death threat, and less depression, fear and avoidance concerning death. Unlike the NDEr, those who know an NDEr also indicated higher neutral acceptance of death, and less anger over their own mortality.

Although causality can only be inferred, rather than proven, from this data, it seems unlikely that those 15 respondents who reported knowing an NDEr personally (and who had significantly more positive life and especially death attitudes) differed from the rest of the sample in any real way, other than their exposure to an actual NDEr. Therefore, we might cautiously suggest that knowing an NDEr personally may somehow lead to more positive life and death attitudes for these individuals. These findings would be consistent with scholars’ descriptions of the effects of NDEs on actual NDErs and would support Ring’s contention of improved life and death attitudes after talking personally to an NDEr. (Flynn, 1982; Greyson, 1983; Noyes, 1980; Ring, 1980, pp. 143-144, and; Sabom, 1982, p. 132). It appears that having personal contact with an NDEr may, by some mechanism, alter personal constructs of life and death. Just how such a mechanism may work must be left to speculation at present. However, some plausible tenets of an explanation may be offered.

It is possible that those who encounter an NDEr (often a friend or relative of the NDEr) may be comparatively more motivated to pursue information on NDEs and more receptive to NDE material since they may want to better understand an emotionally moving experience outlined to them personally, often by someone they know. Upon learning more about NDEs, these individuals may focus on aspects of NDEs which are consistent with their existing constructs of life and death.

While it has not been disproved that exposure to NDEs may change people's personal constructs of life and death, it is, again, suggested that NDEs might simply strengthen existing constructs. After all, only seven per cent of respondents in this study affiliated themselves with non-Judeo Christian religions. To some extent, then, a vast majority of these respondents must have life and death constructs which would allow for the afterlife conceptions suggested by NDE stories. Therefore, it may be that hearing a friend or loved one recount such an emotionally powerful experience, in addition to being exposed to NDE material, may strengthen existing (even
tenuous) beliefs which comprise the life and death constructs of the primarily Judeo-Christian respondents in this study.

Attitudes toward NDEs: their relationship with life and death attitudes

The positive relationship between NDE attitudes and life and death attitudes was very similar to that for NDE knowledge and also stands as a confirmed hypothesis. Those who were more positive toward NDEs expressed more life purpose and future meaning to fulfil. They also expressed more approach-acceptance of death, and less fear, avoidance and depression concerning death. Again, it is important to remember that there was a significant and positive relationship between NDE knowledge and positive NDE attitudes. It has already been suggested that those holding a personal construct of death which includes a belief in an afterlife, would have favourable attitudes toward NDEs upon exposure to such information and would, therefore, go on to learn comparatively more about them.

Do people think NDE information affects them?

To this point, it has been argued that NDE information either strengthens an individual's construct of death (if they believe in such an afterlife), or else it is dismissed as being untrue (if they do not believe in such an afterlife). It has been argued that NDE information does not radically change constructs of life nor death. In support of this argument, it has been noted that those who know more (and were more positive) about NDEs already had well-established "positive" personal constructs of life and death which were supportive of the validity of NDEs before they encountered such information (see table 23). This suggests that the NDE material that they encountered did not radically change - though it may have strengthened - their life and death attitudes or constructs. However, this issue would be further informed by consideration of whether respondents, themselves, indicated that they believed NDE information had affected their beliefs and attitudes.

Survey questions # 37 (a-h) were posed in order to determine whether any of Reker and Peacock's (1981) life attitude factors would be affected by learning about NDEs. While the
majority of respondents did not report any influence on such life attitudes, a significant minority did.

Approximately one-third of respondents agreed or strongly agreed that what they had learned about NDEs had made their own lives seem more meaningful and had increased their desire to find meaning for their. Approximately one-quarter of respondents agreed or strongly agreed that what they had learned about NDEs had increased their belief that they are in control of their lives, and had increased their belief that they had a future purpose to fulfil. These findings suggest that, for a minority of respondents, belief in information on NDEs has positively impacted their own life attitudes.

Survey questions # 37 (i-n) were posed in order to determine whether Noyes' (1980) findings regarding the (life and death attitude) aftereffects of NDEs, noted in NDErs, also applied to the respondents in this study, who had merely read about NDEs. While the majority did not report such "aftereffects", a significant minority of respondents did.

Approximately one-third of respondents agreed or strongly agreed that what they had learned about NDEs had: "reduced my fear of death; "increased my belief in life after death", and; has "brought out, in me, a more passive attitude toward uncontrollable events". With respect to other aftereffects, common among NDErs, only approximately one-sixth of respondents agreed or strongly agreed with the statements that what they have learned about NDEs had given them: "a feeling of special importance": "a sense of relative invulnerability", and; had "led me to reevaluate my priorities in life".

Although Noyes (1980) describes general attitude changes following Near-Death Experiences, no data has been published on the true pervasiveness of such attitude changes: they are simply presented as being "typical" of NDErs.

While a small minority of respondents indicated they felt they had been affected by NDE material, this was by no means typical of the sample. In fact, a majority of respondents to these questions clearly indicated that NDE material had not affected their life nor death attitudes. Nevertheless, the fact that some respondents, even if a minority, believed their fear of death had been reduced, or their belief in life after death had been increased, by what they had learned about NDEs supports our contention that preexisting life and death constructs may, for some, be
strengthened by NDE material. In retrospect, it would have been helpful to have directly asked participants whether their life and death attitudes had been significantly changed or altered by information on NDEs, such as whether NDE stories had caused them to change their mind about the possibility of life after death.

By what means can information on NDEs affect life and death attitudes?

As Durlak has noted, the phenomenon of attitude change is complex, with no consensus about how attitudes are formed or modified (1994, p. 250). Even Kelly (1955) fails to delineate specifically how personal constructs are formed or changed, other than to state that they develop gradually and are hierarchically organized, with the revision of "core constructs", such as death, implying radical changes in the person's outlook.

Therefore, whether or not NDE information may, for some, significantly alter life and death attitudes is difficult to state unequivocally at the present time. However, a central argument of this thesis has been that personal constructs of life and death are likely not radically altered by NDE material alone. In this same respect, several scholars have recognized the fact that individuals' death attitudes are, likewise, not easily altered by purely didactic - as opposed to experiential - death education interventions (Durlak, 1994; Neimeyer, 1994; Pollak, 1980), even those interventions which explicitly or implicitly strive for attitude change.

As Kelly states, "it may take a major act of psychotherapy or experience to get (an individual) to adjust his construction system to the point where the new and more precise construct can be incorporated" (1955, p. 12). Although research suggests that individuals who report having had an NDE appear to have gone through such a "construct-altering" experience (Noyes, 1979; Greyson, 1994), those merely hearing or reading about NDEs apparently have not. We might question, therefore, Ring's (1995) contention that nonNDErs can acquire the "benefits of the NDE" (p. 233), including more positive life and death attitudes, simply by being exposed to NDE material. Although, it is interesting that Ring makes these assertions based on the responses of individuals who "knew" an NDEr, in the sense that and NDEr had visited their classroom. Indeed, those in this
study who know an NDEr also displayed more positive life and death attitudes. Perhaps the medium of delivery of information on NDEs is important, with the experience of speaking to an NDEr being powerful enough to strengthen or even to change life and death attitudes in some people.

If, as is suggested here, some people's life and death attitudes may be affected (strengthened, for example) merely by encountering NDE information, this begs the question of why such attitudes may even be affected (strengthened) at all. How do people react when they encounter material about NDEs?

Mellor argues that the concern for issues of self-identity, apparent in recent decades, is the result of "individuals, left alone to construct meaning in their lives, searching for meaning through the creation of a viable and stable sense of self "(p. 19). Not only do accounts of NDEs provide what some might deem as "evidence" of a self which is maintained even after death, but they are, most often, vague enough so as to be interpreted in a variety of ways - this might allow their incorporation into a variety of personal constructs, meaning systems, and world views concerning life and death.

The effect, if any, of NDE information may depend on the medium through which it is acquired. In their review of death education studies, Durlak and Reisenberg (1991) noted that experiential types of death education (e.g., visiting cemeteries, listening to dying patients etc.) generally produced a modest decrease in death fears and anxieties. Didactic types of death education (for example, lectures and readings) did not consistently show any such decrease. Therefore, we might expect written NDE accounts and television shows about NDEs to have less impact upon life and death attitudes than accounts which are relayed personally. Indeed, this was found to be the case in this study, as those who know NDErs displayed significantly more positive life and death attitudes than those who did not.

Leming and Dickinson inform us that, while the creation of new meaning is always possible, it is difficult to change well established meaning (1987, p. 29). The "new meaning" that one ascribes to the subject of NDEs upon encountering such material must, then, be interpreted in a way that is consistent with one's existing life and death attitudes. In this manner the most likely scenario for the interpretation of NDE material may be either that it is accepted as possible evidence,
for life after death, if one holds such a conception of death, or else is dismissed as a hallucination, dream or is otherwise believed to not be evidence for life after death, if one does not hold such a conception of death. In addition, a third possibility exists for interpreting NDE material. It is conceivable that someone may believe in some form of life after death (even one perfectly in line with what NDE accounts often suggest), but not be persuaded that NDEs are evidence for an afterlife. In such a case, the individual would obviously not be expected to be greatly affected by NDE material.

In summary, Symbolic Interactionist theory would beg the question of whether exposure to material regarding NDEs represents a "condition contributing to the transformation of individuals' subjective meanings" (Charmaz, 1994, p. 37). If we may interpret the term 'transformation of meanings' to include the strengthening of existing constructs, then it appears NDE material may do just that for some people.

The search for meaning is a task that all people share (Wong et al., 1994; Frankl, 1963). At present, it is difficult to predict unequivocally the extent to which NDE information may play a role in our search for the meaning of our lives and deaths. However, the responses of this sample indicate that, for some, it may have an impact. A large number (41%) of respondents indicated that NDEs had "affected them" (survey question #68), and, on question #69, these respondents generally stated that such information reduced their fear of death through strengthening their beliefs in an afterlife. This is consistent with the findings from survey question #37 where a significant minority of respondents indicated that what they had learned about NDEs had strengthened their attitudes towards life and death in a number of positive ways.

This section began with the question of whether NDE material affected life and death attitudes. Findings from this study suggest that it can, for some people, strengthen previously developed constructs of life and death, particularly for those who believe NDEs to be objective proof of an afterlife. However, no evidence has been presented here to suggest that NDE material dramatically changes life and death attitudes, for example, convincing someone that there is life after death when they had previously rejected this notion.
The Potential Impact of NDEs & NDE Information on North American Society

It is likely that Near-Death Experiences, and the reports of them, will have an impact on North American society, via our conceptions of death. to some, currently uncertain extent. Charmaz states that, "the concepts of death held by a group may be expected to change as their-socia-historical experience changes" (1994, p.98). At the same time, Kearl notes that "our conceptualizations of death so profoundly shape cultural meaning that any change in the "...envisioning of the hereafter is amplified through the entire social order, bringing changes from top to bottom". (1989, p. 23).

A review of Western attitudes toward death throughout history reveals that, for perhaps the first time, due to changed socio-cultural conditions, NDEs may be becoming a significant part of the social construction of death (Kellehear, 1996). Although the nature of any impact of NDE material on the social construction of death has not been investigated, such an impact would require the widespread acceptance of - or at least exposure to - NDE accounts. But what is the evidence that North American society accepts NDE accounts as valid or is otherwise receptive to the subject?

Are North Americans receptive to NDE material?

As results from this and other studies have shown, North Americans are currently quite receptive to NDE material and may become even more so in the future. Sociological reasons for the current popularity of NDEs include: (1) our changing relationship with social institutions (including religious institutions); (2) the changing nature of death in contemporary North American society. These reasons are explained below.

First, North American society has been developed based predominantly on a Judeo-Christian moral perspective and, despite the fact that only half of the adult (North) American population now claims church-affiliation (Fulton and Owen, 1994, p.21), the Judeo-Christian influence on our society remains, including its influence on our construction of death. In
addition. according to Kastenbaum, almost all afterlife beliefs are formed in early childhood while nonbelievers in an afterlife are more likely to have reconsidered this topic in recent years (1991, p.333). Both of these facts suggests that North Americans' inclination is still to assume that there is an afterlife. Given this continuing religious influence, it is not surprising that NDEs are popular, since they fit quite well with the Judeo-Christian view of an afterlife (Kellehear, 1996, pp. 92-95).

Relativistic secularism and the deconstruction of our institutions (of religion etc.) have eroded the confidence many North Americans have in institutional explanations for the meaning of their lives: an explanation which, according to Frankl (1963), all humans crave. One consequence of this has been a rise in popularity of many new spiritual or quasi-religious movements (sometimes referred to, collectively, as "the New Age movement"). Many of these groups point to NDEs as supporting their views (Kellehear, 1996, pp. 92-95), for example, the view that humanity is capable of attaining a higher level of consciousness.

Therefore, regardless of whether one adheres to a more traditional religious perspective or has adopted the views of an alternative form of spirituality, the three-quarters of North Americans who believe in life after death (Bibby, 1995; Gallop, 1982) are likely to find at least some aspects of NDE accounts with which they can agree and, therefore, to be receptive of material about NDEs.

Although traditional and emerging religious institutions both seem to view NDEs positively, other social institutions, such as academia, often times do not (Kellehear, 1996, p. 95-98). Despite the fact that the scientific materialistic view is still championed by academics (who often dismiss NDEs as mere psychological episodes) the continuing momentum of deconstruction in our society allows individuals to dismiss this formerly unquestioned scientific 'expertise' in favour of explanations which are more "personal amid the seemingly impersonal nature of modern death" (Kellehear, 1996, p. 97).

Second, the changing nature of death in contemporary North American society has also contributed to the popularity of NDEs. The contemporary process of questioning, openly discussing, and reconstructing the meaning(s) ascribed to death has freed individuals to interpret death in new, often eclectic ways rather than accept the institutionalized explanations of the past
(see pp. 49-59 of this thesis for a more detailed explanation of the changed nature of death in North America). In addition, technical and demographic changes, including an aging society and greater education in resuscitation techniques, mean it is likely that NDE accounts will be reported with increasing frequency by the general public for some years to come (Kellehear, 1996, pp. 81-84).

The media influence

Undoubtedly as a result of the North Americans' general acceptance of the subject of NDEs, the media has focussed more attention on them in recent years (Kellehear, 1996). This attention has been commonplace in both the print and audio-visual media including numerous magazine and newspaper articles, recent movies (such as "Flatliners" and "Ghost), and T.V. and radio talk shows on the topic. Usually this media coverage is "in sympathy with that of the NDEr . . . rather than a critical, balanced, and informed discourse" (Kellehear, 1996, p. 79) meaning that NDEs are most often presented as possible evidence for life after death.

This continued media attention on the subject of NDEs is likely to familiarize North Americans with NDEs and even to normalize NDEs within our social construction of death. As such a normalization process occurs, NDEs stand a good chance of becoming an accepted component of the North American 'understanding' of death, further solidifying their impact on our society.

By all accounts, North Americans currently appear receptive to information about NDEs. As with Kellehear's (1990) study, only a small minority of respondents in this study (14% and 16% respectively) offered explanations for the NDE account which clearly questioned its objective validity. It seems likely that the popularity of NDEs will remain, or perhaps even grow, as North Americans seek to reconstruct death within a context of: (1) a changing attitude toward the social institutions of religion, medical science and academia, and; (2) a changing experience with death.

The extent of the impact of NDE reports on North American society will depend on the degree to which they become part of our social construction of death. As Kellehear has argued, NDE material is likely to remain a popular topic in the media of Western societies (1996, pp.76-
Therefore, it is reasonable to assume that, for younger generations at least, NDE material will comprise part of our construction of death.

Assuming some greater or lesser impact of NDEs and NDE material on the social construction of death in North America, we now turn to the potential implications of this process. Again, although the extent can only be surmised, we can assume their impact may be seen in several areas, including: (1) in the death attitudes of North Americans; (2) in the area of death education; (3) in the way we die (and live); (4) in the way we grieve, and; (5) as a political tool for religious/spiritual or other interest groups.

The potential NDE impact upon the death attitudes of North Americans

The impact of NDEs on the life and death attitudes of North Americans depends upon both continued media attention to the subject, and upon continued receptivity by the general public. As argued above, both of these appear likely to be fairly prevalent for the foreseeable future. But what is the nature of the likely impact of NDEs on death attitudes in our society?

It is important to, firstly, reiterate that not all members of society will be affected by NDE material. Older members of society often have both less exposure to the types of mediums NDE material is presented in (television, Internet, alternative or 'New Age' literature), and more traditional or conservative views. Due to these factors, older cohorts are likely to remain comparatively less affected by NDE material for some years to come. Many of those who do not believe in life after death are also not expected to be significantly affected by NDE material. While the changing of death attitudes is a complicated process (see Durlak, 1994), this thesis has argued that exposure to NDE material does not change death attitudes.

Having noted the above exceptions, a fairly strong case may be made for the expectation that a majority of North Americans - specifically, the 70 percent or so that do believe in life after death (which tend to include, especially, females) - may have their attitudes toward death (and life) strengthened by the exposure to NDE material. This is so for reasons outlined above including the wide appeal that NDEs hold for those of differing religious or spiritual backgrounds, and the potential role of NDEs in assisting individuals to find meaning in a
deconstructionist, post-modern society where the institutional handling of death issues has been found lacking.

Twentieth century secularization has left a void in individuals in this culture regarding the meaning of our deaths, and hence, our lives and our existence (Mellor, 1994, pp. 11-12). Findings from this study suggest that, in countering this void, NDEs strengthen some people's belief in an afterlife, and hence their belief that our lives have some greater meaning than we are currently aware of. As evidence of this argument, some 40 percent of respondents in this study indicated that NDEs had affected them in some way, often mentioning a strengthened belief in life after death and/or a diminished fear of death. Further, roughly one-third of respondents were able to specifically identify other ways in which, they believed, NDE material had positively affected their attitudes toward their own life and death.

If this suggested effect of NDE material is true for some then, as Butler states, "after one has lived a life of meaning, death may lose much of its terror, for what we fear most is not really death but a meaningless and absurd life (1975, p. 422). This perspective is also in line with Erikson's (1963) concept of the achievement of integrity (versus despair) and Marshall's concept of the positive effects of "biography construction" (1980). Although each of these three scholars focussed on the elderly as they evaluated the lives they had led, nevertheless, the concept may have some parallels with what happens when NDE material affects someone's life and death attitudes: a person may find meaning for their life (with associated increases in positive feelings about their death) through the realization that their life has had (or will have) a purpose. Phrased another way, an older person may achieve cohesiveness and integrity when finding meaning in the reconstruction of their life during its review. A believer in NDEs as evidence of life after death may achieve similar psychological states when finding meaning in the reconstruction of their life and death during the contemplation of - what they believe to be - their future afterlife (an "(after)life preview" of sorts).

The apparent increase in the frequency of NDEs, and the increased dissemination of information regarding them in the last 20 years, may represent a new socio-cultural "experience" for western society, helping to shape a new conception of death. Indeed, although their knowledge of NDEs was not great, many participants in this study reported being affected by
NDE information, particularly when that information was from an "NDEr" they knew. However, one key question to be posed at this juncture is: how will NDE information be incorporated into the belief structure of individuals? The answer may be that, as with much unequivocal and unexplained phenomena, individuals will likely tend to incorporate those aspects of the phenomena which comply with their existing world view, or else they will dismiss the phenomena altogether. It is not surprising, given that a majority of Canadians (over 70%) believe in some form of life after death (Bibby, 1995), that a significant percentage (49%) of respondents in this study interpreted NDEs as being "possible evidence of life after death", and that only a small minority (16%) would go so far as to question the objective validity of NDEs.

As Marshall has stated:

"From birth to death, human beings continuously negotiate with one another to work out some sense and substance of order with regard to who they are, who they were, and who they will be. Inevitably, this effort involves attempts to give meaning to death itself" (1980, p. v).

At the present time, this social negotiation described by Marshall is increasingly involving the subject of near-death experiences. This is evident in the increasing frequency with which discussions of NDEs appear in North American media and popular literature, as well as in thanatological and other scholarly works.

If, as has been argued, NDEs may strengthen existing beliefs in a continued existence after death, they may be a welcome contribution to our construction of death. Existentialists have noted the benefits of a belief in life after death. According to Peter Koestenbaum (1971), the fear of death as the end of selfhood can only be remedied by a belief in the continued existence of the self after death: the "transcendental ego." Indeed several studies have shown that a belief in life after death reduces death anxiety (Neimeyer, 1994), and death threat (Krieger and Epting, 1974). But does NDE material strengthen one's belief in life after death? Results from survey question #37-j indicate that 41 per cent of respondents felt NDE material did, indeed, increase their belief in life after death.
The potential NDE impact upon death education

As Durlak has explained, contemporary death education exists for reasons beyond the scholarly development of thanatological theory. Many death education programs appear to rest on the assumption that (North) American society does not presently handle death well. Durlak suggests that a great number of these programs exist for the purpose of correcting misinformation regarding death-related issues, and/or providing an opportunity for individuals, including health care professionals, to examine their feelings and to become better prepared to deal with death-related issues and scenarios (1994, p. 244), in part, by reducing their own negative affect regarding death (p. 253).

The reconstruction of death in North American society would, logically, influence and be influenced by death education. As one component of this reconstruction, the impact of NDEs on death education may include both thanatological courses offered to a wider (lay) audience and those directed toward health care professionals.

Death education for the lay community

Currently, death education programs offered to a wider (lay) audience are numerous and varied, and include activities such as academic courses at colleges, universities, and schools; encounter group exercises; self-explorations; and grief counselling workshops, among other activities. Such courses are sometimes differentiated on the basis of whether they offer experiential elements, or are strictly didactic. Courses including some experiential elements often have the goal of helping people deal with their feelings about death, while didactic courses are primarily interested in participants' cognitive awareness of death-related issues (Durlak, 1994, p.244). Durlak and Reisenberg (1991) note that, while both didactic and experiential-type death education courses have been "moderately" successful in changing participants' death-related cognitions and behaviours in a positive manner, only experiential-type courses have been shown to significantly affect participants' affects, or feelings, about death. Differing opportunities to discuss personal feelings, and to reflect upon and process attitudes may account for the above
There is no way of predicting whether the potential inclusion of NDE material into courses of thanatology would influence the nature of the courses offered (experiential versus didactic). However, it seems that only experiential-type courses, where participants could "discuss personal feelings" about NDEs, and "reflect upon and process attitudes" toward death in light of information on NDEs, would significantly affect participants' feelings and attitudes toward death. Perhaps the participants in this study who indicated that NDE material had positively impacted their life and or death attitudes, had participated in such experiential thanatological courses. Alternatively, they might have gone through some of the same processes offered in such courses.

The fact that 12 percent of respondents in this study had learned about NDEs through an educational course might indicate that the topic of NDEs is making its way into thanatological courses offered to a wider (lay) audience.

Death education for health care professionals

Currently, death education programs offered to those working in the field of health care include professional development courses, workshops, encounter group exercises; self-explorations, and; grief counselling workshops. The extent to which NDE material is included in such courses is unknown.

That less than six percent of respondents in this study had discussed NDEs with a health care professional or clergy member informs us that these are not common sources of NDE information currently. This implies that such professionals may not be prepared, may be unmotivated or otherwise may not have cause to discuss NDEs with patients. Yet the fact that a strong majority (about 3/4) of respondents in this study wanted health care professionals to know about and be prepared to discuss NDEs leads to an interesting question: Will the subject of NDEs find a (more prominent) place in the academic and/or clinical training of doctors, nurses, clergy, psychologists and the like? This is an especially cogent question in light of Viney's (1995) contention that many health care workers want to learn more about NDEs because understanding differences (p. 254).
some of its implications may make caring for the dying less difficult, in that it may allow the care giver to discuss the process of dying with patients (p. 64).

While changing conceptions of death may allow more general acceptance of the NDE phenomenon than is presently the case, Kellehear suggests reasons why NDEs may find a greater voice among certain health care professions, such as nursing, as compared to others, such as medicine (1996, pp. 74-75). Kellehear reminds us that medicine is a science and is still practised (and, especially, is taught) mainly by men (who express less belief in both life after death and in the objective validity of NDEs). Therefore, one could hardly expect NDEs, which so openly challenge the materialist assumptions upon which medicine has been based (in the Western world), to be endorsed by the medical profession. The nursing profession, on the other hand, is mainly female, and "its allegiance to scientific models of inquiry is not so unquestioning as that of medicine" (1996, p.74). Other health care professions, such as psychologists, clergy working in health care facilities, and others may generally fall somewhere in between the nursing and medical professions. It would, therefore, be reasonable to assume that NDE material would find its way into nursing and other professions' courses and workshops to a greater extent than for medicine.

Beyond the opportunities to acquire information on NDEs through courses in death education, both lay and professional audiences may gain an understanding of NDEs from what is written in texts and articles. At the present time, such material is appearing with increasing frequency in both lay and professional/academic writing. Despite this fact, as Wacs and Neimeyer point out, the field of thanatology rarely receives adequate coverage in the texts of many disciplines for which it has relevance (1995, p. 437). As these authors further indicate, this omission may be partly due to the fact that a great deal of thanatological writing has been atheoretical. As a result of this, death education remains "diverse and fractionated", varying in its scope, form, level of intensity, and pedagogical approach (Wacs and Neimeyer, 1995, p.441).

Even if the subject of NDEs finds prominence in courses of thanatology, it is far from certain that such courses will significantly affect death attitudes in our society, as measures of death attitude change after death education courses, show mixed results, and seem to depend on factors such as religiosity (Knight and Elfenbein, 1993).
If lay and professional courses in thanatology are influenced by the changing death attitudes in our society, which themselves are influenced by NDE material, then it is reasonable to expect that this process will eventually also have an impact upon the social institutions controlling the way we die.

**The potential NDE impact upon the way we die**

Any impact of NDEs on the way we die would have to be noticeable in the institutions - traditional and emerging - which administer health care. These could include traditional institutions such as hospitals, or more recently accepted institutions, such as hospices and home care services.

Yet we would not expect the impact of NDEs on the way we die to be limited to the aforementioned health care institutions. A changing social construction of death, aided, perhaps, by information on NDEs, would likely impact the way in which individuals and families viewed issues related to death and dying, such as euthanasia, living wills, and other forms of control of death and the dying process.

**The impact of NDEs on health care institutions**

Despite the current process of change in our conceptualization of death, we have not seen much change in our health care institutions' management of situations of death and dying. There has, more specifically, been little or no evidence of the inclusion of NDE material into these situations in any manner. This should not be surprising, in light of the lack of acceptance of NDEs by the medical community. After all, it is the medical profession which continues to control most health care institutions. Therefore, the odds are not good that health care facilities (especially traditional facilities such as hospitals) will incorporate practices which are accepting of NDE material such as NDE discussion groups on terminally ill wards etc.

Health care professionals who display higher death threat or anxiety are less likely to discuss death with patients, and more likely to avoid the topic (Neimeyer, 1994, p. 88-89). To
the extent that NDE material can strengthen one's belief in an afterlife (thereby reducing death anxiety or threat) and, hence, becomes accepted by some in the health care field, this material may yet find its way more frequently into health care professionals' journals, training courses and workshops. In this manner, it may be possible that traditional health care institutions would, at some future point, begin to include NDE material in their care of dying patients and their families.

In some alternative health care facilities, such as hospices, the patients and, in some cases, the health care workers, have chosen that setting based on a disenchantment with more traditional (e.g., hospital) care. It is conceivable, and perhaps likely, that such individuals might be more receptive of NDE material than those in traditional care settings. It is possible that both patients and health care professionals in such settings would be more likely to discuss NDEs. Positive effects on (the strengthening of) life and death attitudes might be seen in some patients as a result of the exposure to NDE material and the opportunity to discuss it.

Indeed, numerous hospices are now focusing on a spiritual approach to dying which recognizes the literature regarding the transformative spiritual experiences or "nearing death awareness" (Callanan et al, 1992) that many patients seem to have just prior to their deaths (personal communication, Dr. Mary Vachon, Nov., 1999).

The impact of NDEs on the way we view control over death and the dying process

In recent decades we have seen some degree of change in North American society's behaviour regarding death in terms of: the growing 'death and dying' movement, including interest groups advocating hospice care for the dying, euthanasia, living wills, and other causes.

While there have been no studies to date to confirm this notion, it is possible that members of such interest groups might use NDE accounts in an attempt to support their arguments and enact change over the control of death and dying. While the focus of many of such interest groups presently appears to primarily concern legal or moral issues, as opposed to spiritual ones, it is conceivable that such groups could also try to take advantage of the current widespread sentiment that NDEs may be evidence for life after death, to garner support for the
changes they propose. Some in our society might fear that NDEs, with their implied assurance of an afterlife, could, indeed, encourage the liberalization of laws governing euthanasia, living wills, and control of the dying process. However, there are reasons to believe this would not be the case. Much NDE material makes a point of emphasizing that NDErs who had attempted suicide report that they "had learned" that they were wrong to attempt to take their own life (Ring, 1995). In addition, NDE reports have actually been used to deter suicide, based on a strengthened belief that our lives have a special meaning or purpose (McDonagh, 1979; Ring, 1980).

Directly associated with the way we die in contemporary North American society is the way we view aging and dying. For many of those who die in North America (e.g., the elderly and terminally ill persons), death is an anticipated event. Therefore, if awareness and acceptance of NDEs is growing, and if they are changing or strengthening our conceptions of death, then NDEs might also be changing our views of aging and dying. Specifically, if the public is generally accepting that NDEs are evidence for life after death (and this thesis suggests that they are), then public sentiment could conceivably begin to lean away from medical control over the extension of life for the elderly and terminally-ill, in favour of more control by the individual and/or their family.

In summary, any impact of NDEs on the way we die would have to be noticeable in the institutions which administer health care and/or in the way in which we viewed issues related to death and dying, such as euthanasia, living wills, and other forms of control of death and the dying process. At the present time, there is little or no evidence that either of these areas have been affected by NDE material. It remains to be seen whether NDEs will have any impact in this manner. If they eventually do, this may first be noticeable in the informal and then formal discussions occurring at hospices.

As Duncan reminds us, "institutions are powerful to the extent they help man to face what cannot be cured but must be endured" (1968, p. 218). To the extent that NDEs help some people to face death, and perhaps to help alter the way we die, they may become "powerful institutions" yet.
The potential NDE impact upon the way we grieve

If NDEs act to change or strengthen our views of life and death then they may also have an impact on the manner or extent to which we grieve and on the institutions (funeral homes, grief counselling etc.) involved in this process.

As Stannard notes, "the behaviour of a people in the face of dying is the result of their attitude toward, and their vision of, death" (1977, p. 9). Continued exposure and receptivity to NDEs might lessen grief being experienced by some members of society (at least the kind of grief generated by anxiety over the departed's post mortem fate), due to a stronger belief in a positive life after death (the reader is reminded that published NDE accounts rarely mention negative experiences).

Physician Melvin Morris believes that NDEs have important implications for patients and their families. He feels knowledge of NDEs can give the dying patient a feeling of control and can calm their fears. In addition, Morse asserts, the dying or deceased patient's family can find comfort and meaning in death and can accept that "it is now scientifically possible to entertain the survival hypothesis" (1992, p. 216).

Approximately one-quarter of those who responded to survey question #37 p agreed or strongly agreed that what they had learned about NDEs had helped them to deal with the death of someone close to them. This indicates that some respondents feel NDE material has already been helpful to them. However, it is also noteworthy that 61 percent of respondents to this question indicated that NDE material had not helped them in this manner: These individuals may either have not considered NDEs in the processing of their grief, or may have experienced grief not associated with anxiety over the departed's post mortem fate (and, thus, not tempered by the thought of NDEs); or they may have not believed NDEs were evidence of an afterlife and so not have been affected by them.

The potential effects of NDE material on the institutions involved in the grief process, including the funeral industry, grief counselling etc., are difficult to predict. These institutions seem to be generally conservative in nature and so may be slow to begin using NDE material (information, books, posters etc.) to comfort grieving mourners, if they do so at all.
NDEs as A political tool

The impact of NDEs as a political tool may involve their use by spiritual, religious or other interest groups in an attempt to attract or maintain supporters, to justify certain of their beliefs and/or to enact change.

One of the primary goals of any social movement must be to attract and/or to maintain supporters. Spiritual groups espousing New Age philosophies have been growing in popularity in North America in recent years. At the same time, traditional religious denominations have been struggling to maintain memberships and to recruit new members (Kellehear, 1996).

NDEs may attract those persons seeking some form of religious or spiritual affiliation. It is possible that NDE material may affirm the life and death attitudes of religious persons more so than it does nonreligious persons, and, therefore, would be a rather attractive for the former group. This seems likely for at least two reasons: First, both NDE material, and practically all major religions, support the notion of continued existence after death; second, other interventions which may effect death attitudes, such as death education programs, have more positive effects on religious individuals than on those who are either somewhat or non-religious (Durlak, 1994, p. 257). Therefore, it is conceivable that some individuals or groups may use information on NDEs to promote their own world views in order to attract new members and retain existing members.

The use of NDEs to justify certain beliefs and/or practices

Aside from the more political agenda of trying to attract and/or to maintain supporters, there are those, usually seen as leaders of interest groups, who simply want to convince others and themselves perhaps, that their perspective is the correct one.

The fact that NDE accounts lend themselves well to a wide variety of interpretations means they may be used to support any one of a number of religions or other (re)emerging spiritualistic traditions professing a belief in some form of life after death.

Indeed, the NDE literature contains evidence that individuals from a variety of religious and spiritual backgrounds have attempted to lay claim to NDEs as evidence of the validity of their own world views (Christians: Eadie, 1994; Rawlings, 1979; and Harpur, 1991 and those
with an emerging consciousness - or New Age - perspective Ring, 1995).

Kellehear identifies numerous Christian theologians who have mentioned NDEs in order to support their religious views (1996, pp. 71-73). He also explains how several groups who do not believe in life after death, including Seventh Day Adventists and certain strands of Judaism, dispute NDEs as evidence of an afterlife.

Whether or not NDEs represent objectively valid glimpses into a 'life after death certainly remains open to debate. What, now, appears to be beyond question is the idea that NDE material, at least in the near-term, will have an impact on the death attitudes of some North Americans. In all probability, such 'information' will be used by individuals and groups to legitimize their own ideological frameworks or belief systems - particularly by those who need or want to "prove" the existence of life after death.

As Philip Mellor has noted, "the social significance of religion rests largely on its legitimization of marginal situations through the relation of them to sacred orders, a socially-produced attempt to keep phenomena such as death within the bounds of a socially-produced reality" (1967, p. 45).

From Mellor's argument, it might be reasoned further that for a religion or spiritual movement to maintain (or increase) its "social significance", it would be helpful for it to incorporate NDEs into its socially-produced world view, including its explanation of the meaning of death. This is so since, as this thesis has shown, NDEs are already being used by some people to help them construct - or to defend their previous construction of - the meaning of death.

**NDEs as a means to enact change**

In the future NDEs may be used in the attempt to enact social change in several areas. As mentioned, emerging spiritualistic groups may already be using NDEs to try to enact change in the religious/spiritual institutions, beliefs and practices of North American society. For example, Ring suggests that NDEs are now a "cultural phenomenon" (1996, p. 181). He believes that they may help greatly in issuing in "a new human consciousness" (p. 194) which may be guided, in part, by principals learned through NDEs and similar transcendental experiences. This theory undoubtedly has arisen from the beliefs of NDErs themselves who often "believe that their
experiences are spiritual experiences which reveal both God and human potential in a new and luminous light" (Kellehear, 1996, p. 61).

Those who may use the subject of NDEs to enact change are not limited to religious/spiritual groups. Interest groups advocating hospice care for the dying, euthanasia, living wills, and other causes related to death and dying, are examples of groups which may use NDEs in this way. Perhaps such groups might offer NDEs (which suggest an existence after death) as another reason for allowing dying persons to maintain some control over their situation.

To reiterate, NDEs may be used by spiritual, religious or other interest groups in an attempt to attract or maintain supporters, to justify certain of their beliefs and/or to enact change. In this respect, NDE material is not unique: Kellehear reminds us that many of our 'experiences' with death, including NDEs, ghosts, euthanasia, and abortion, are "common battlegrounds for competing social meanings of death" (1996, iv).

**Summary: The potential impact of NDEs on North American Society**

In summary, NDEs are likely to have an impact on North American society given the likelyhood of continued media attention and continued receptivity by the general public.

Although the extent can only be surmised, this thesis has argued that the impact of NDEs may be seen in several areas, including: (1) in the death attitudes of North Americans; (2) in the area of death education; (3) in the way we die and live; (4) in the way we grieve, and; (5) as a political tool for religious/spiritual or other interest groups. Although we have presented five areas in which NDE material may impact upon North American society, this list is by no means exhaustive. There may be other ways in which NDEs and NDE reports influence North American society. This impact should remain of interest to sociologists in general, and certainly to those involved in the areas of thanatology and NDE studies.

Despite the attempt to consider the potential impact of NDEs on North American society at the present time, one wonders what the implications would be, should the apparently significant number of 'negative' NDEs (Rawlings, 1978; Greyson and Bush, 1996, pp. 231-43) ever be widely promoted by the audiovisual media?
Limitations to this study's findings

The survey used in this study may carry limitations which should be acknowledged. This is true despite the fact that its design and analysis were guided by previously established theory and research in both NDE and life and death attitude research, and while it was pre-tested for clarity of phrasing, and face validity.

The potential limitations of this study relate to several main areas, namely: (1) the validity and reliability of this survey; (2) the sample and the extent to which findings may be generalized; (3) researcher biases, and; (4) omissions of potentially important information, including both survey data and theoretical commentary.

Survey Validity and Reliability

Regarding the validity and reliability of the scales, indices, and questions used in this survey there are several concerns.

First, there remains some question as to how to effectively measure NDE knowledge on surveys. Open-ended questions soliciting any and all of a respondent's information on the topic have been met with participant resistance and/or very little data: why this should be has been discussed (see methods section). NDE knowledge scales, with their true, false, or undecided options, may be problematic also. Respondents might somehow be able to discern correct answers, or at least to often guess answers correctly, regardless of their true level of NDE knowledge. Although participants in this study were asked not to guess if they had no idea which was the correct answer, there is no way to ensure, nor to measure this phenomenon. The NDE knowledge scale is further problematic in the sense that this "knowledge" is taken to mean concepts agreed upon by "experts" in the field of near-death studies. However, many of these concepts are far from being established, objective facts. Additionally, the use of words such as "common", "rarely", and "often" in several of the NDE knowledge scale questions requires subjective interpretation of these terms which reduces the scale's validity. In short, there is no
way to be absolutely certain that those participants deemed to be higher in NDE knowledge were, in fact, more knowledgeable about the topic.

Second, since the NDE Attitude Index has never been used before (it was developed for this study) its validity and reliability have never been assessed. This is of concern when interpreting results from this index, despite the fact that its questions were derived based on previous research and that questions appeared valid both to those who pre-tested it and to experts on NDEs (see Methods section). In addition, the nature of the study, itself, and/or certain NDE knowledge questions may have biased responses to NDE attitudes questions in that they may have served to help legitimise NDEs in some respondents minds, and to, thus, exaggerate positive attitudes and/or temper negative attitudes toward them.

Third, although it is common practice in thanatological research, it has not been unequivocally proven whether death attitudes can be fully determined using explicit measures such as survey questions. Many in the psychoanalytic tradition would undoubtedly argue that indirect methods are required to assess subconscious feelings toward death (Neimeyer, 1994). Theoretical opposition to survey data assessing death and life - attitudes further diminish our confidence in the obtained results. In addition, the temporal stability of conscious and unconscious death attitudes (Tomer, 1994), let alone NDE knowledge and attitudes, remains unclear.

Fourth, the validity and reliability of many of the death and life attitude questions, as they are worded here, have not been established. Therefore, the extent to which each of these questions accurately assesses what is intended remains unknown.

One of the measures which contributes to the evaluation of respondents' death attitudes (the DAP-R) has been changed somewhat from the original version. Although only minor changes in wording to some questions have been made (an attempt to increase clarity of expressed ideas), the omission of many of the questions (only one representative question on each type of death attitude has been included, for the sake of brevity), and the addition of other questions regarding fear of own death (taken from the literature) result in some uncertainty regarding the validity and reliability of these questions as they are used here. This is despite the fact that, taken on face value, the questions chosen do seem to cover the general range of death attitudes as are presented in the literature on the topic. It is regrettable, nonetheless, that all of the questions from
the established DAP-R (and also the LAP) were not used. Although this would have made an already lengthy survey even longer, it would have afforded us greater confidence regarding the validity and reliability of our measures, and would have allowed us to compare our results to those from other studies.

Fifth, the Threat Index may be theoretically and practically problematic, despite reports that it is a reliable and valid tool for measuring death threat.

Use of the Threat Index proved problematic for participants in this survey. In the participant concerns section of the surveys, several respondents explicitly expressed that they found this exercise to be awkward or that they outright didn't understand how to complete it. Numerous others either chose not to begin the Index or abandoned the exercise part of the way through it.

In addition to its methodological difficulties, comparative results between the Threat Index and NDE knowledge and NDE attitude scale scores proved unremarkable. Much more fruitful were the comparisons between measures of NDE knowledge and attitudes, and more direct measures of death attitudes.

Results obtained using the Threat Index were, in one case, contrary to hypotheses. Increased positiveness toward NDEs (which was associated with approach acceptance of death), was also associated with more death threat. Finding an explanation for this anomaly has proven difficult (see discussion section on NDE attitudes and life and death attitudes).

Although it is possible that the Threat Index does, indeed, measure a deep, subconscious level of death fear or “threat”, we are convinced that death attitudes are better indicated by direct measurement methods, including the Likert scale questions posed in this study. In part, this is because there are numerous reasons for questioning the interpretation of Threat Index scores (see Chambers, 1986). Among these reasons is the fact that the Threat Index regards the difference between our construct of life and our construct of death as an indicator of the “threat” implied by our own death. It would be easy to imagine, however, an individual who views life and death as being very different (and who would, therefore, be identified as having high death threat on the threat Index) and yet does not feel particularly negative toward death or perhaps may even look forward to it as an escape from earthly suffering and/or as a blissful afterlife.
Six, there is no way to know whether demand characteristics affected the data gathered for this study. Although caution was taken to ensure participants would not know what the author's hypotheses were, it is possible that some respondents would have surmized that author's perspective and so, whether consciously or unconsciously, altered their responses so as to better confirm the author's hypotheses.

In hindsight, there are several questions which could have been omitted from the survey. Questions regarding death-related discussions, open-ended knowledge of the elements of NDEs, and perhaps, even, use of the Threat Index could have been omitted from the survey, since analysis of responses to these questions contributed little to our understanding of this topic.

Although the numerous concerns outlined above regarding the validity and reliability of the scales, indices, and questions used in this survey do not prove that these measures are invalid, they do mean that maximum caution should be taken in interpreting findings from this study until such time as they are replicated using more well-established research tools.

The sample and the extent to which findings may be generalized

The sample used in this study should not be considered to be representative of the general populations of North America, Canada, or Toronto. This is due to the fact that a sample of convenience has been used.

Although the adequate response rate, the diversity of expressed NDE knowledge and attitudes, and the age diversity of this sample are encouraging, the skewed gender and education levels and, perhaps, the limited religious diversity and sample size represent concerns regarding the extent to which these findings may be generalized to the wider community. In particular, while a response rate of 61 percent is not low for survey data, we have no way of knowing what, if anything, differentiated those who did and did not return a survey.

At minimum, significant caution should be taken in attempting to make broad generalizations based on data from this study.
Researcher biases

The researcher's personal biases may be problematic. For example, because the author does believe that NDEs are a legitimate phenomenon, he might have inadvertently organized the survey in such a way as to elicit similar attitudes in respondents. In addition to this possibility, the author may have looked for similar attitudes to his own and/or indications that his hypotheses were confirmed, either during the analysis of data, or during the formulation of the discussion and conclusions.

Omissions of potentially important information, including both survey data and theoretical commentary

While there has been an attempt to assess death and life attitudes in this study, the decision not to include complete indices is unfortunate. Wong et al.'s Death Attitudes profile-Revised and Reker and Peacock's Life attitude profile have been tested previously for validity and reliability. These scales could have been used in their entirety, even though this would have lengthened an already lengthy survey. Our confidence in the findings of this study would have been enhanced.

It is an unfortunate fact that no comprehensive philosophical, sociological, nor psychological theory exists with which to account for the wide range of death attitudes evident in North American society (Neimeyer, 1994, p. 264-265; Tomer, 1994). While this thesis has attempted to offer some small contribution in integrating two theories of death attitudes, Search for Meaning theory and Personal Construct theory, within the context of Social Interactionism, the lack of an overall theory is problematic.

To recapitulate the key points of this section, there are several limitations to the findings of this study. These relate to: the validity and reliability of the survey used, the sample and the extent to which findings may be generalized; researcher biases, and; omissions of potentially important information, including both survey data and theoretical commentary.
Thesis Summary

In this thesis we have investigated the relationship between NDE knowledge and attitudes and death attitudes.

In reviewing the NDE phenomenon we explained what NDEs are, we examined the history of NDE reports and research, and summarized current theories of the causality of NDEs. It was clarified that no adequate physiological or other model exists which could confirm nor disprove NDErs typical response that these are objectively real experiences of what it is like to die. The Kundalini model, and the possibility of linking it to specific neuro-physiological models, was identified as holding promise for understanding the physical manifestations of NDEs. We also identified the common after-effects of NDEs for NDErs, and wondered whether any of these same effects would be experienced, as Ring (1995) claims, by nonNDErs who merely encountered NDE material.

Findings from all known studies of NDE knowledge and attitudes were summarized, and two promising research thrusts were identified: Thornburg-type (1988) NDE knowledge and attitude questionnaires; and Kellehear and colleagues' (1990a; 1990b) surveys assessing explanations and reactions to NDE accounts. The methods section later identified that the NDE knowledge and attitude scales and questions used in this study were developed out of these two NDE research thrusts.

Correlates of North American death attitudes were identified as a means of establishing a framework within which factors shown to affect NDE knowledge and attitudes could be understood. It was found that religiosity (or, at least, belief in life after death) may be one of the strongest predictors of NDE attitude just as it is with death attitudes. It was also found that life experience, particularly having had an NDE or knowing an NDEr was also a strong predictor of NDE attitude.

The section on the social construction of death's meanings in North America presented arguments suggesting that the meanings North Americans construct for death are slowly changing due to transformations in North American society, specifically regarding death-related issues.
The methodology chapter outlined the research methods used in this study and included sections on: concerns with previous research on NDE and death attitudes; instrument and survey question design; data collection procedures; the development of NDE knowledge and NDE attitude scales and; methods of data analysis. The methods chosen and implemented in this research study were deemed to be consistent with accepted practices of survey and scale design and construction and data collection and analysis.

The results chapter presented key data from indices and individual questions pertaining to each of the six research questions.

Most respondents in this sample displayed familiarity, yet only superficial knowledge of the information available on Near-Death Experiences. The print and audio-visual media was, by far, the most frequent source of information concerning NDEs. Those individuals who knew more about NDEs were often those who had some personal experience with them (claimed to be an NDER or to know an NDER), and those who believed in life after death. In addition, there were trends toward more NDE knowledge among those with less formal education, and those who were younger.

Most respondents in this sample displayed either benign, or else very positive attitudes toward Near-Death Experiences. Those individuals who felt most positively about NDEs were females, those who believed in life after death, and those who were more religious or spiritual.

Those who knew more about NDEs also tended to view them more positively than those who knew little, although it could not be determined which, if any, had "caused" the other. However, there was some evidence presented that NDE attitude, or at least the predisposition to feel positively toward NDEs, may stimulate the acquisition of information on NDEs.

Those with higher NDE-knowledge and more positive NDE attitudes also indicated somewhat more positive life and death attitude profiles in terms of displaying: more approach acceptance of death, and; a stronger belief that one has a future purpose to fulfill.

All of the findings regarding NDE knowledge and attitudes are consistent with, although do not prove, the theory that people interpret NDE material in a way that may confirm and strengthen, but does not radically change, their own current personal constructs (i.e., meanings) of life and death. This perspective accounts for the fact that some, such as those who believe in
life after death, may be more motivated to pursue and/or to be more positive toward NDE material, while others may dismiss NDE material as untrue and/or unimportant.

In the discussion and conclusions section we attempted to explain these and other research findings in terms of the theoretical perspective taken throughout this thesis.

It seems that the belief systems of many people in the contemporary Western world may predispose them to feeling positively toward NDEs. Given the contemporary process of deconstruction in Western society, with its re-examination of beliefs, values, and meanings (Mellor, 1993, p. 17), many individuals may be responsive to, attempt to learn more about, or otherwise support NDE material as a means of justifying their own constructions of life and death.

The search for meaning is a task that all people share (Wong et al. 1994; Frankl, 1963). At present, it is difficult to predict unequivocally the extent to which NDE information may play a role in our search for the meaning of our lives and deaths. However, the responses of this sample indicate that, for some, it may have an impact. A large number (41%) of respondents indicated that NDEs had "affected them" generally by reducing their fear of death through strengthening their beliefs in an afterlife. This is consistent with the findings from survey question #37 where a significant minority of respondents indicated that what they had learned about NDEs had strengthened their attitudes towards life and death in a number of positive ways.

It was argued that NDEs are likely to have an impact on the institutions, beliefs, and practices of North American society given the likelihood of continued media attention and continued receptivity by the general public.

Of special interest to health care professionals, the results from this study support the view that the general public would welcome the opportunity to discuss NDEs with them and that they want health care professionals to be prepared to discuss NDEs with patients. For some individuals, these views might arise from the perspective that NDEs could be helpful to those facing and/or fearing death, and/or to those grieving the loss of a loved one. Health care professionals should be aware that it appears unlikely that they would significantly change a patient's view on death, but that, if the patient already believes in a similar notion of life after death, then NDE material, and especially personal contact with someone who has had an NDE, might strengthen positive attitudes towards their own life and death. It is recommended,
Therefore, that all institutions and organizations involved in the professional training and development of health care professionals include instruction regarding NDEs and related issues as a regular part of their programs.

For the general public, the results from this study support the view that NDEs, and reports and information about them and other "spiritually transformative experiences" (Kason, 1994), are now so commonplace as to have made them a part of our social construction (understanding) of death. The general public needs to know that there are others who share their perspective on the causes and/or meaning of NDEs, yet that there are still others who have a very different perspective. Individuals should understand that their own perspective on NDEs can be valid for them, yet not for another, since both the phenomenon, and its interpretation, remain largely subjective.
REFERENCES


A multidimensional measure of attitudes towards death. In R.A. Neimeyer (Ed.) Death 


Dear Survey distributor,

I am a graduate student in the Department of Behavioural Science at the University of Toronto.

This survey will investigate peoples' knowledge and attitudes concerning Near-Death Experiences. It will also investigate their attitudes toward their own life and death.

You are under no obligation to assist in the distribution of these surveys but your assistance would be helpful in gathering data on this largely unexplored subject.

There is no risk involved to the participants. The cost involved will be the time it takes for the participant to complete the survey. Individual responses will be kept confidential and no participant will be identified in any way.

If you are willing to assist in the distribution of several surveys please sign your name below.

I, ____________________________, agree to assist Charles Reid, a graduate student at the University of Toronto, in the distribution of surveys on the topic of Near-Death Experiences. I understand that I may withdraw my assistance in distributing this survey at any time. I, further, agree to follow the survey distribution instructions indicated in the distributor information letter I have received, including the instruction to explain to every person I ask to complete a survey that their participation is completely voluntary and anonymous.

Signature: ____________________________

Date: ____________________________
Dear survey distributor,

Thank-you very much for agreeing to help me distribute my survey. Here are just a few guidelines that I need you to follow:

1) Try to distribute the surveys to as wide a variety of individuals (over 18 years old) as possible, based on their: (a) religion/religiosity; (b) age; (c) gender; and (d) socioeconomic status etc. Of course, all of those whom you ask should have adequate reading ability in English.

2) Explain to those who agree to complete the survey that (a) this study is for a friend (not anyone they know - if they happen to ask) who is using it as part of a required research project for "school." Once they agree to fill one in, tell them it is very important that they actually fully complete and then mail the survey they've been given (since not many have been distributed, I'm hoping everyone who takes a survey, will actually return it).

3) ** Please keep an accurate count of how many individuals refuse to complete a survey. This information is very important to me !! (e.g., "I had to ask 11 people in order to find 8 who were willing to complete a survey, because 3 refused.")

4) Tell those whom you ask to complete the survey that you DON'T KNOW what the study is about - you're simply helping out a friend (try to get them to "do you a favour by filling in a survey" without them looking inside the envelope to see what the study is about - I'm trying to avoid people agreeing to do the survey only if they're interested in the topic). Also, ask them to NOT discuss they survey or its subject matter with anyone until after they complete it and mail it in (because it is their own responses I am interested in - uninfluenced by others).

Again, thanks very much for helping me out!

Chuck Reid

For your reference: I was able to distribute ________ surveys. To distribute this many, I had to ask _________ people if they would fill one in, because the following number of people refused to complete one ____________.
Dear survey respondent,

Thank you for agreeing to complete this survey. It will be very helpful in the attempt to understand how people respond to the topic of near-death experiences.

Because only a small number of these surveys have been handed out, we are relying on your particular help in completing and returning your survey.

In completing this survey, find a quiet location where you can be alone. The survey will take approximately 50-60 minutes to complete. Please do not discuss any issues or questions regarding this subject matter with anyone else, either prior to or during completion of the survey, because we are interested in your own opinions, whatever they might be. After completing the survey, simply place it in the envelope provided and mail it. In order to assure anonymity, do not write your name anywhere on the survey. *Please complete and place this survey in the mail within 1-2 weeks after receiving it.

Anyone interested in obtaining the results of this study (available in several months) is invited to request this information; simply write the address given at the top of this page including your name and address.

* If you have any questions or concerns, you are invited to call the study's director, Charles Reid, at (416) 742-7878 to discuss your participation in the study.

Once again, thank you for your help in completing this survey.
STUDY: Knowledge & attitudes concerning near-death experiences

* Please complete this survey anonymously in the privacy of your own home. As we are interested in YOUR OWN opinions, please do not discuss the following questions with anyone before or during completion of this survey.

All information that you provide will be kept strictly confidential; no one but the study director will have access to it. Please take the time to think carefully about, and then respond to the following statements and questions. We are interested in YOUR responses, whatever they may be. There are no right or wrong answers. Please circle ONLY ONE of the choices for each question. Please answer all questions in the order they appear, do not skip ahead.
1. Over the past year, approximately how often have you thought about your own death?

1. never  
2. yearly/hardly ever  
3. monthly  
4. weekly  
5. daily  

2. How important is spirituality or religion in your life?

1. not at all important  
2. not very important  
3. moderately important  
4. quite important  
5. very important  

3. Do you believe in some form of "life" after death?

1. Yes  
2. No  
3. Undecided  

4. Do you believe that "life" after death will involve the continuation of your present individual identity?

1. Yes  
2. No  
3. Undecided  

5. How strong are your above beliefs about "life" (or the lack of it) after death?

1. not strong at all  
2. not very strong  
3. moderately strong  
4. quite strong  
5. very strong  

6. To what extent have you discussed the topic of death with person(s) significant to you?

1. not at all  
2. very little  
3. somewhat  
4. quite a bit  
5. a lot

DEATH ATTITUDES
Please respond to the following statements, circling **ONE** of the response choices [ie. one of SD D U A SA] for each statement. Wherever these symbols [SD D U A SA] are used, SD=strongly disagree; D=disagree; U=undecided; A=agree; SA=strongly agree.

7. "I believe that a pleasant afterlife will follow my death"  
   SD  D  U  A  SA

8. "I view my death as a relief from earthly suffering"  
   SD  D  U  A  SA

9. "I would rather avoid thinking about the topic of my death"  
   SD  D  U  A  SA

10. "I would neither fear my death nor welcome it"  
    SD  D  U  A  SA

11. "The fact that I will have to die some day makes me angry"  
    SD  D  U  A  SA

12. "I find the topic of my death to be depressing."  
    SD  D  U  A  SA

13. "The thought of my own death frightens me"  
    SD  D  U  A  SA

14. "The uncertainty of not knowing what happens to my consciousness or spirit after death worries me"  
    SD  D  U  A  SA

15. "The fact that I could no longer help to care for others if I die worries me"  
    SD  D  U  A  SA

16. "The thought that death will mean the end of my personal existence bothers me"  
    SD  D  U  A  SA

17. "I am worried that there is a chance that death will mean suffering for me"  
    SD  D  U  A  SA

18. "The knowledge that I will be missing out on things my friends & relatives are doing after I die disturbs me"  
    SD  D  U  A  SA

19. "I am upset that, when I die, I will lose control over the plans or affairs I have currently"  
    SD  D  U  A  SA

20. "I am anxious about what might happen to my body after death"  
    SD  D  U  A  SA
DEATH ATTITUDES (continued)

21. "I am worried about my own death because my death would cause grief to my relatives and friends"  
SD  D  U  A  SA

22. "I am worried that my death won't matter much to anyone"  
SD  D  U  A  SA

23. "It bothers me that my death will mean a loss of life's pleasures"  
SD  D  U  A  SA

24. "I am worried that my death may mean an eternal separation from loved ones"  
SD  D  U  A  SA

25. "I am bothered by the fact that, if I died today I wouldn't have achieved my life goals"  
SD  D  U  A  SA

LIFE ATTITUDES

To what degree do you agree or disagree with the following statements:

26. "I have discovered a meaningful purpose for my life"  
SD  D  U  A  SA

27. "I feel the lack of a meaningful purpose for my life"  
SD  D  U  A  SA

28. "My life is in my own hands and I am in control of it"  
SD  D  U  A  SA

29. "I want to find a meaningful purpose for my life"  
SD  D  U  A  SA

30. "I feel I have a future purpose to fulfil"  
SD  D  U  A  SA
31. Below is a list of dimensions, each of which is made up of a pair of opposites. For each dimension, please CIRCLE the word on the side with which you see YOURSELF or YOUR PRESENT LIFE more closely associated. In some cases, you may feel as if both sides describe you to some degree, but please circle only one side of each dimension: the one that describes you better. For example, do you see yourself as more predictable or random?

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<tr>
<th>Strong</th>
<th>Weak</th>
<th>Open</th>
<th>Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentally Healthy</td>
<td>Crazy</td>
<td>Happy</td>
<td>Sad</td>
</tr>
<tr>
<td>Competent</td>
<td>Incompetent</td>
<td>Feels Good</td>
<td>Feels Bad</td>
</tr>
<tr>
<td>Secure</td>
<td>Insecure</td>
<td>Concrete</td>
<td>Abstract</td>
</tr>
<tr>
<td>Conforming</td>
<td>Nonconforming</td>
<td>Changing</td>
<td>Static</td>
</tr>
<tr>
<td>Specific</td>
<td>General</td>
<td>Predictable</td>
<td>Random</td>
</tr>
<tr>
<td>Easy</td>
<td>Hard</td>
<td>Learning</td>
<td>Not Learning</td>
</tr>
<tr>
<td>Useful</td>
<td>Useless</td>
<td>Productive</td>
<td>Unproductive</td>
</tr>
<tr>
<td>Alive</td>
<td>Dead</td>
<td>Helping Others</td>
<td>Being Selfish</td>
</tr>
<tr>
<td>Healthy</td>
<td>Sick</td>
<td>Existence</td>
<td>Nonexistence</td>
</tr>
<tr>
<td>Understanding</td>
<td>Not Understanding</td>
<td>Peaceful</td>
<td>Violent</td>
</tr>
<tr>
<td>Hope</td>
<td>No Hope</td>
<td>Objective</td>
<td>Subjective</td>
</tr>
<tr>
<td>Good</td>
<td>Bad</td>
<td>Satisfied</td>
<td>Dissatisfied</td>
</tr>
</tbody>
</table>
32. For each of the dimensions below, please CIRCLE the side with which you more closely associate YOUR OWN DEATH, thinking of your own death as if it were to occur at this time in your life.

- Strong --- Weak
- Mentally Healthy --- Crazy
- Competent --- Incompetent
- Secure --- Insecure
- Conforming --- Nonconforming
- Specific --- General
- Easy --- Hard
- Useful --- Useless
- Alive --- Dead
- Healthy --- Sick
- Understanding --- Not Understanding
- Hope --- No Hope
- Good --- Bad
- Open --- Closed
- Happy --- Sad
- Feels Good --- Feels Bad
- Concrete --- Abstract
- Changing --- Static
- Predictable --- Random
- Learning --- Not Learning
- Productive --- Unproductive
- Helping Others --- Being Selfish
- Existence --- Nonexistence
- Peaceful --- Violent
- Objective --- Subjective
- Satisfied --- Dissatisfied

33. Place an asterisk (*) beside each of the 10 dimensions above that seem to matter the most to you when rating your own death.
BACKGROUND KNOWLEDGE OF NEAR DEATH EXPERIENCES

In recent years, researchers have been investigating the reports of individuals who have suffered a traumatic and, in many cases, nearly fatal event of some sort. A number of these individuals believe that they had, for a short time, actually died and then come back to life. Experiences like these, where the person believes that the conscious separation of their intellectual and emotional functioning from their physical body has occurred, are now commonly referred to as Near-Death Experiences (NDEs). All references made in this survey to the term near-death experience (or NDE) refer to this definition, given above.

34. Have you ever heard of these type of NDE reports before?  
1............Yes  
2............No  
3............Uncertain

35. From which sources do you believe you have heard information about NDEs? (place a check mark beside all that are appropriate)

- newspaper, or magazine:  
- television, radio, or movie:  
- in person, from a social worker:  
- in person, from a clergy member:  
- in person, from a psychiatrist or a clinical psychologist:  
- friend (including those mentioned above):  
- family member:  
- Other (identify in space below):

[If you answered "No" to question #34, OR if you feel you do not know enough about NDEs to have formed at least a vague opinion about them, go to question #38]

36. The very first time I heard about NDEs . . . . . . . . .

a) ... I believed they were evidence for life after death"  
SD  D  U  A  SA

b) ... I felt they were an important topic for the general public to know about"  
SD  D  U  A  SA

c) ... I had a strong interest in them"  
SD  D  U  A  SA

d) ... they (NDEs) had an emotional impact on me"  
SD  D  U  A  SA
a) . . . has helped me to accept the life that I have lived so far

b) . . . has made death seem more purposeful

c) . . . has increased my understanding of death

d) . . . has made my own life seem more meaningful

e) . . . has made death seem more purposeful

f) . . . has increased my belief that I am in control of my own life

g) . . . has increased my desire to find meaning for my life

h) . . . has increased my belief that I have a future purpose to fulfill

i) . . . has reduced my fear of death

j) . . . has increased my belief in life after death

k) . . . has given me a feeling of special importance

l) . . . has given me a sense of relative invulnerability

m) . . . has led me to reevaluate my priorities in life

n) . . . has brought out, in me, a more passive attitude toward uncontrollable events

o) . . . has strengthened my previous spiritual/religious beliefs

p) . . . has helped me to deal with the death of someone close to me

q) . . . has convinced me that, if there is a life after death, it will be pleasant for me
38. If you have read any books, or articles, or seen any movies or T.V. shows discussing NDEs or death and dying, please try to identify them (as best you can) in the space provided below:

39. In your estimation, how many adults in North America believe they have had a near-death experience?

One out of every ________________________ adults.
40. Please list as many aspects about NDEs as you can; include anything that might be related to the topic (point form is acceptable):
The following 26 questions assess your exposure to information on NDEs. Kindly circle an answer of either true, or false, or undecided for the following statements. * Please do not blindly guess at the answers. (NDE = near-death experience).

**CAUSES & CORRELATES**

41. NDEs are a result of a lack of oxygen to the brain.  
42. There are no significant differences between NDEs reported by those who are given medical drugs and NDEs reported by those who are not given medical drugs.  
43. NDEs are simply a reflection of the individual's psychological expectation of what death will be like.  
44. People who take LSD have identical experiences to those individuals who report NDEs.  
45. The more religious an individual, the more likely he/she is to have an NDE.

**AFTEREFFECTS**

46. Individuals reporting an NDE indicate that it has not had a powerful effect on their subsequent belief in an afterlife.  
47. Those who report an NDE later commit suicide more often than the general public.  
48. Those who report an NDE claim to become more spiritually focused and less materialistic after the experience.  
49. An increase in psychic abilities has not been mentioned in the literature as an aftereffect for anyone reporting an NDE.  
50. Increased physical sensitivity to electrical devices is a common aftereffect of those who report an NDE.  
51. Individuals reporting an NDE indicate that it has had a powerful effect on their subsequent belief in an afterlife.
52. In some NDE reports, a point is described where the person was told or had the choice to return to life. 

53. People who claim to have had an NDE have been unable to accurately describe their resuscitation (efforts to stimulate heartbeat & breathing).

54. Most people who report an NDE have no difficulty putting their experience into words.

55. Most reported NDEs are described as being peaceful, quiet, and painless.

56. A review of one's life is never mentioned in NDE reports.

57. Entering a dark tunnel is a very common aspect of NDE reports.

58. Meeting deceased relatives is very rarely mentioned in NDE reports.

59. In reported NDEs, unconditional love is often claimed to have radiated from a source or being of light.

60. No sounds of any kind are ever mentioned in NDE reports.

61. Often, those claiming to have had an NDE state that they felt like they were floating outside of their physical bodies.
62. Most people reporting an unpleasant NDE mention feelings of intense heat.

63. Often, unpleasant NDE reports mention a dull, grey light or darkness.

64. Sometimes, those reporting an NDE claim that fearful scenes reoccur months or years after the experience.

65. Those reporting an unpleasant NDE rarely claim that they felt in actual danger during the experience.

66. Frequently, barren or ugly surroundings are mentioned in reports of unpleasant NDEs.

67. In your own estimation, how many of the above questions regarding NDE knowledge (questions # 41 - 66) have you answered correctly?

I estimate that I have answered __________ out of the 26 NDE knowledge questions correctly.
At this point, imagine that you are watching a T.V. news story. The topic of the story is - what it is like to die. One of the guests on the show recounts an experience where he/she describes almost dying of a heart attack. The following is a summary of the account:

"I felt like I had left my physical body and was floating above the scene where I watched a medical team trying to revive me. Then, I felt like I was being drawn into a dark tunnel towards a bright light. Several of my deceased relatives came to meet me. It was an indescribably happy occasion, I felt total peace and contentment. At the end of the tunnel, I reached a source or being of light which radiated an all-encompassing love and acceptance of me. We reviewed my life so that I saw all of the situations when I had succeeded in showing love and kindness towards others during my lifetime, and also the times when I had failed to do so. My next memory is of being in the emergency room of the hospital. I am absolutely convinced that my near-death experience was real"

68. Has this or any other information about NDEs affected you in any way?

   Yes   No   Uncertain

69. If "Yes" or "Uncertain", please explain below how NDE information may have affected you:
NDE ATTITUDE INDEX

Please respond to each of the following statements, circling the **ONE** response choice [SD D U A or SA] that most closely indicates your own personal opinion.

SD=strongly disagree; D=disagree; U=undecided; A=agree; SA=strongly agree.

70. Near-death experiences are an important topic for me to understand.

71. I believe that events individuals claim to "remember" during their NDE did not really take place.

72. I find the topic of NDEs to be very uplifting.

73. I am fascinated by the topic of NDEs.

74. There is no point in caring about the subject of NDEs.

75. The topic of NDEs frightens me.

76. I believe that NDEs are not simply all in the minds of those who report them.

77. I do not have any desire to know about NDEs reports.

78. The topic of NDEs is one that particularly deserves to be studied in-depth.

79. I don't find the subject of NDEs to be very reassuring.

80. NDEs are genuine glimpses into the life of the spirit after death.

81. I am not interested in the subject of NDEs.
82. I believe that NDEs are merely a way in which the mind protects itself against the anxiety of life-threatening situations.  
83. I am not worried by the things I know about NDEs.  
84. Near-death experiences are not an important topic for me to understand.  
85. I am curious to know more about NDEs.  
86. I believe that individuals reporting NDEs who insist their experience was actually real are definitely wrong.  
87. I would watch a show on NDEs if I noticed one was on T.V.  
88. Examining books and other sources of information about NDEs is a waste of time.  
89. I am not scared by the NDE reports I have heard.  

90. Please place a check mark beside the one explanation that you feel best explains the NDE account you have just read.

It was a passing hallucination.__________
It was a dream.__________
It was the beginning of a mental illness.__________
It was a side effect of medical drugs/techniques.__________
It was possible evidence for life after death.__________
It was the product of a vivid imagination.__________
It was material brought forth from the mind's unconscious__________
I don't know how to explain it.__________
Other explanation (please identify below)
91. Have you ever had a personal experience similar to the NDE account described in this survey?

1. Yes
2. No
3. Not Certain

92. Do you know anyone personally (other than yourself) who believes they've had a NDE?

1. Yes
2. No
3. Not Certain

93. If "Yes" or "Not certain", how many individuals do you believe you know personally that have had an NDE-like experience? 

94. Consider this statement:
In the future, the following persons should be prepared to discuss NDEs with individuals who want to discuss the topic.  SD = strongly disagree;  D = disagree;  U = undecided;  A = agree;  SA = strongly agree.

(a) Nurses:  
SD  D  U  A  SA

(b) Clergy:  
SD  D  U  A  SA

(c) Social Workers:
SD  D  U  A  SA

(d) Physicians:  
SD  D  U  A  SA

(e) Psychiatrists//Clinical Psychologists:  
SD  D  U  A  SA
95. Consider the following statement:
I would personally be comfortable discussing the topic of NDEs in the following circumstances: (for each situation, circle the statement that best describes your opinion)
SD = strongly disagree; D = disagree; U = undecided; A = agree; SA = strongly agree.

(a) With family members (in general):
SD  D  U  A  SA

(b) With close friends (in general):
SD  D  U  A  SA

(c) With a physician:
SD  D  U  A  SA

(d) With a nurse:
SD  D  U  A  SA

(e) With a clergy member:
SD  D  U  A  SA

(f) With a clinical psychologist/psychiatrist:
SD  D  U  A  SA

(g) With a social worker:
SD  D  U  A  SA

To what extent do you agree or disagree with the following statements:

96. Information on near-death experiences may be helpful to persons approaching death.  
SD  D  U  A  SA

97. Information on near-death experiences may be helpful to the families of persons approaching death.  
SD  D  U  A  SA

98. Information on NDEs may be helpful to individuals who are worried about their own eventual death.  
SD  D  U  A  SA

99. Information on NDEs may be helpful to individuals who are worried about a loved one who has died.  
SD  D  U  A  SA

100. The nature of NDEs appears to fit perfectly into my personal philosophy of death.  
SD  D  U  A  SA
DEMOGRAPHIC INFORMATION

101. What is your year of birth? __________

102. Are you: (circle one number)

1........Female
or 2........Male

103. What is your present occupation? ____________________________

104. Beginning with and including grade One, how many years of formal schooling have you completed? __________ years.

105. What is the highest level of formal education you have completed?:

(circle one number)
1........some elementary school
2........elementary school
3........some high school
4........high school diploma
5........community college diploma
6........university bachelors degree
7........university post-graduate or professional degree

106. Religious affiliation (if any) (circle one number)

1........Catholic
2........Jewish
3........Muslim
4........Protestant
5........Buddhist
6........Hindu
7........Other (please specify) ________________________________
8........No religious affiliation
9........Atheist
The purpose of this survey has been to examine the opinions of individuals to see if there is any relationship between their knowledge and attitudes regarding Near-Death Experiences, and their attitudes towards life and death.

Is there anything that you would like to add that you haven't had a chance to say on this questionnaire?
Figure 1: Scree Plot of the 15-Item NDE Knowledge Scale
Figure 2A: Scree Plot of the 20-item NDE Attitude Index

Figure 2B: Scree Plot of the 17 NDE Attitude Questions Comprising Factor 1
APPENDIX D

Figure 3: Scree Plot of the 25-Item Threat Index

Figure 4: Scree Plot of the 7-Item Threat Index
Dr. Allan Kellehear  
Department of Sociology  
La Trobe University  
Victoria, Australia  3083

Dear Dr. Kellehear,

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If these arrangements meet with your approval, please sign this letter where indicated below and return it to me in the enclosed return envelope. Thank you sincerely for your time and assistance.

Kind regards,

Charles Reid

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Print Name  
Date
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The excerpt to be reprinted is the G + 3 model of the (25 item) Threat Index, as published in The Journal of Personality and Social Psychology, 1991, Vol. 60, pp. 122-129. This 25 item version has been adapted from the 40 item Threat Index, the procedural manual for which appears on pages 235 through 241 of F. R. Epting and R.A. Neimeyer's Personal Meanings of Death: Applications of Personal Construct Theory to Clinical Practice.

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Kind regards,

Charles Reid

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________________________________________  __________________________________________  ________________________________
Signature                                      Print Name                                      Date
Dr. Robert A. Neimeyer  
Department of Psychology  
Memphis State University  
Memphis, Tennessee  38152


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